Retrospective Conversion of Bibliographic Records in Nigerian Academic Libraries: an Empirical study of Libraries using the KOHA ILS.

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ABSTRACT

Retrospective conversion of bibliographic records is not a recent practice among Nigerian academic libraries. However, the end product of this process, which is a functional Online Pubic Access Catalogue (OPAC) has been underwhelming. This is due to various challenges that have hindered the libraries from achieving a successful retrospective conversion. Some of these challenges include unreliable software, lack of a union catalogue and sheer absence of exchange of information among the libraries. This study therefore measures the practices and experiences of twenty (20) Nigerian University Libraries in the course of carrying out retrospective conversion of their resources using the KOHA library software. The study adopted a survey method of research with a self-developed questionnaire as the instrument of data collection. Data analysis was with the aid of the SPSS software and the presentation was done using simple frequency and percentage. Findings show that erratic power supply and low Internet bandwidth are the major challenges facing Nigerian libraries in the course of retrospective conversion.

Keywords: Retrospective conversion, OPAC, Academic Library, Library Automation, Cataloguing, Online Cataloguing, KOHA ILS

INTRODUCTION

As early as the 1970s, Nigerian academic libraries have realized the limitations of the traditional manual catalogue and the advantages of having a web based, searchable automated catalogue. A functioning Online Public Access Catalogue (OPAC) provides better visibility and enhances the utilization of the library collection. Other advantages include easier management of cataloguing routine, availability of accurate data collection and most importantly, the opportunity of creating a union catalogue that opens the doors for libraries to access materials not even available in their own collections. Thus, the attempts to build a form of electronic catalogue by Nigerian academic libraries started in 1975 at the Kenneth Dike

Library, University of Ibadan[1]. This was followed by many other universities and research institutions across the country.

However, many of the earlier attempts of automated catalogues by Nigerian academic libraries had resulted in disappointment with many Libraries having to go through several library management systems only to return to the manual system due to incessant system failures[2]. A search through available literature revealed that inadequate library software, more than any other problem is responsible for low rate of OPAC in Nigerian academic libraries. Studies have shown detail of how Nigerian libraries adopted various software in their quest to build OPACs and automate their entire operations[3]. Once a particular software failed, they bravely moved on to another one; hence their challenges and frustrations did discouraged others to attempt automation projects

It is therefore not surprising that the availability of relatively free open source software such as KOHA has led to sharp increase in Libraries embarking on automation projects and consequently building OPACs to aid better access to their collections. The increasing rate of retrospective conversion projects in Nigerian libraries is indeed a good indicator of the growth of library automation in Nigeria[4]. There are various studies detailing the experiences of Nigerian libraries in building library OPACs with different software. These studies include **the analysis of the experience of Kenneth Dike Library, University of Ibadan, Nigeria in building its library OPAC[5]; a narration of how the Nigerian Institute of Advanced Legal Studies, Lagos is going about building its OPAC through manual retrospective conversion[6]; and comparative analyses of retrospective conversion processes in several universities in Nigeria[7,8].** What is common to all libraries studied is that they have all built their OPACs to a significant level where they can be made available to their users. These

reported success stories and many others not mentioned here however constitute a tiny proportion of libraries with operational library software in Nigeria.

For instance, out of eleven (11) libraries in Osun state who claimed to be automated; only one 14% (1) has a functional and remotely accessible OPAC[9]. This is not surprising as it took University of Lagos and University of Ibadan thirteen and ten years respectively to complete retrospective conversion of their manual catalogues[10,11.] The available literature is unanimous on the fact that retrospective conversion is a long process especially when it is done manually with in-house staff as is the common practice among Nigerian libraries[12]. If not carefully and meticulously approached, retrospective conversion may soon become another abandoned project or done in a manner that defeats the purpose of building an OPAC in the first place; easy access. Consequently, it is suggested that documenting the experiences of those libraries that have successfully carried out retrospective conversion of their records in spite of the overwhelming problems encountered in developing economies is a way of boosting the chances of others planning to embark on the same project[13]. It is in line with this that this study examines the experiences of selected Nigerian academic libraries who are either in the process or have completed retrospective conversion of their collections using the KOHA library software

Statement of problem

There is an increasing report of successful adoption and implementation of integrated library systems in Nigeria fuelled by the availability of open source software such as KOHA[14]. However, no library automation project is complete without a library OPAC through which users can gain remote and easy access to the entire library collections[15]. Building an OPAC involves retrospective conversion of existing bibliographic records, a task that requires time, fund, commitment and scrupulous planning if it is to be successful. It is therefore imperative to document the experiences of libraries currently engaged in retrospective conversion as a way

of providing guidance, not only to those planning to start a retrospective conversion project but also for those who are currently facing various challenges in the process of building their library OPACs.

Research Questions

The study seeks to find answers to the following questions:

- What is the predominant method adopted by academic libraries implementing the KOHA ILS during retro-conversion projects?
- Is there any cooperation among academic libraries implementing the KOHA ILS during retro-conversion projects?
- What categories of staff are involved in the retro-conversion project?
- What are the challenges faced by academic libraries implementing the KOHA ILS during retro-conversion projects?
- What are the innovative solutions provided for various challenges faced by these libraries?

Methodology

A survey research method was adopted in the conduct of this study. The population of the study includes all academic libraries in Nigeria who have successfully implemented the KOHA Integrated Library management software. However, in the absence of official data, convenience and purposive sampling techniques were adopted to select the respondents. The instrument used for data collection was a self-developed questionnaire which was sent electronically through various media such as WhatsApp; E-mail; Discussion Forums etc. eventually, response was received from 23 Institutions. Out of this number, 3 are not automated and thus excluded from the study. The 20 responding institutions include Federal, State and Private Owned

Universities across Nigeria. The data collected for the study are presented and analyzed using descriptive statistics such as percentages, mean, standard deviation.

1. Ajayi Crowther University Oyo
2. Lead City University Central Library Ibadan.
3. Samuel Adegboyega University, Ogwa
4. Wesley University library, Ondo
5. Federal University of Technology Akure
6. University of Ilorin
7. University of Lagos, Akoka, Lagos
8. Ondo State University of Science and Technology Okitipupa
9. Nigeria Police Academy, Kano
10. Kwara State University, Malete, Kwara State
11. Federal University Dutse, Jigawa State
12. National Open University of Nigeria
13. Federal University of Technology, Minna, Niger State
14. Technical University Ibadan, Oyo State
15. University of Port-Harcourt
16. Summit University, Offa, Kwara State
17. Bowen University, Iwo
18. Adeleke University, Ede
19. Redeemed University Ede
20. Ladoke Akintola University, Ogbomoso, Oyo State.

ANALYSIS AND DISCUSION

Table 1 provides a representation of the demographic characteristics of the respondents. Out of the sixty (60) respondents, 12% (7) have Doctorate degrees, 52% (31) have Masters Degrees while 36% (22) hold either Higher National Diploma (HND) or Bachelor degrees. In term of Status, 5% (3) of the respondents are University Librarians; 10% (6) are Principal or Senior Librarians; 51% (31) are Librarian I/II; 7% (4) of them hold the rank of Assistant Librarian. Also, there are 6 Library Officers which means this category constitute 10% while the Technical Staff (n=10) constitutes 17%. An analysis of the specializations revealed that specialists in E-library and Automation services (No=20) constitute 33%, closely followed by experts in Cataloguing and Classification (No=19) who make up 32%.

15% (9) specialized in 'Circulations'; 8% (5) indicated that they specialized in Serial Management and Reference Services respectively. Specialists in Acquisition are the lowest; 4% (2). Regarding Working Experience; 30% (18) have between 1 to 5 Years of experience; 52% (31) have 6 to 10 years; 15% (9) have experience of between 11 and 20 years while 3% (2) have been librarians for more than 20 years. Analysis of the gender revealed more male 72% (43) than female 28% (17**) survey respondents**.

Table 1: DEMOGRAPHICS

Academic Qualification	Percentage	Frequency
PhD	12%	7
MLIS/MSc	52%	31
HND/BLS	36%	22
Position Held		
University Librarian	5%	3
Principal /Senior Lib	10%	6
Librarian I/II	51%	31
Assistant Librarian	7%	4
Library Officer	10%	6
Technical Staff	17%	10
Specialization		
Cataloguing and Classification	32%	19
Serial Management	8%	5
Circulation	15%	9
Reference Services	8%	5
E-library/Automation	33%	20
Acquisition	4%	2
Working Experience		
1-5 Years	30%	18
6-10 Years	52%	31
11-20	15%	9
20+ Years	3%	2

Gender		
Male	72%	43
Female	28%	17

Figure 1 provides data to show that majority of the libraries that have adopted the KOHA software commenced the retrospective conversion of their bibliographic data more than three years ago. (10 of the responding libraries are in this category). Two of the libraries started the project exactly three years ago while six libraries commenced the retrospective conversion two years ago. The remaining two of the responding libraries indicated that their project started a year ago.

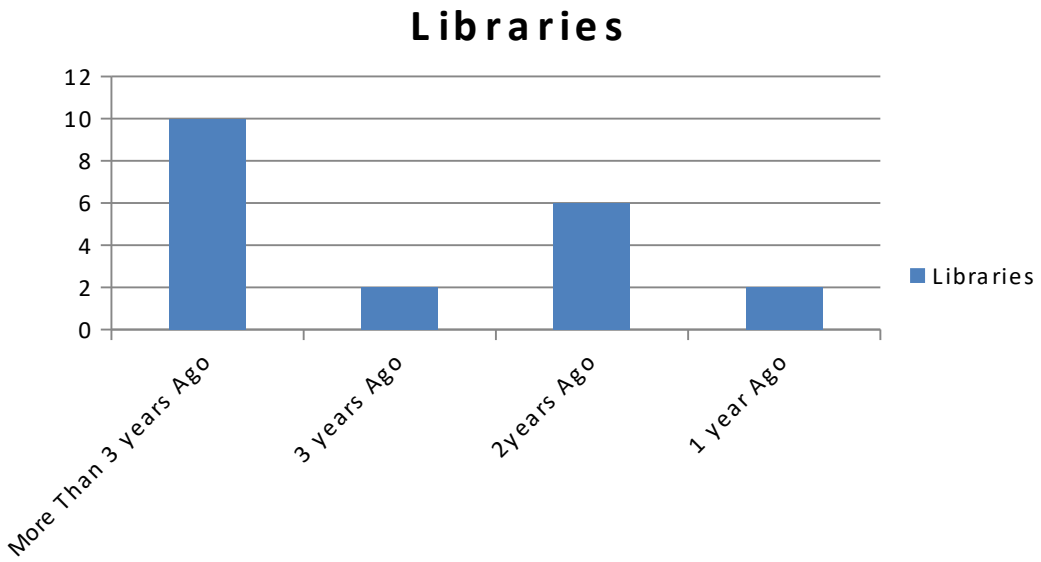

Figure 1: Commencement of Retro-conversion Project

Status of the retrospective conversion project

Figure 2 examines the status of the **retrospective** conversion project in each of the responding institutions. **Thirteen** of the projects are still ongoing while four are reported as completed.

Two of the projects are reported as abandoned while **one** is 'suspended until further notice'. Comparison with Figure 1 shows that all the completed retro-conversion projects started more than three years ago. Another interesting fact that can provide a proper perspective is the fact that none of the library with complete conversion project has collection of more than **thirty thousand** (30,000) volumes. (See figure 4)

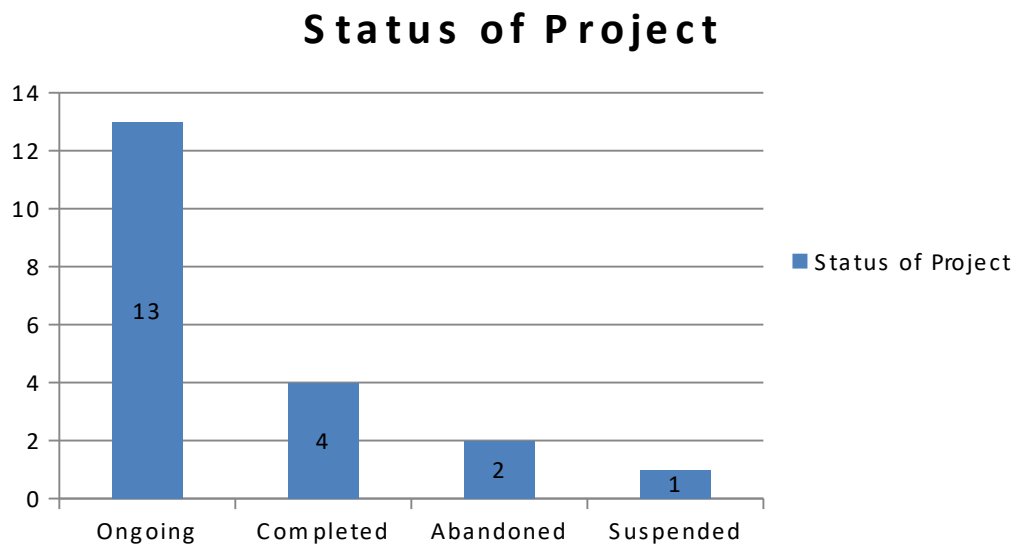

Figure 2: Status of the retro-conversion

Collection analysis

There is a good argument in support of conducting a thorough analysis of the collection before the commencement of retrospective conversion project[16]. **A proper analysis of the collection provides a clear picture of the state of the collection enabling the library to take decision on issues such as weeding, streamlining the catalogue and, most importantly, choosing the most appropriate approach for the conversion**. The data presented in figure 3 indicates that fifty percent of the responding libraries conducted a pre-conversion analysis before the start of the project while fifteen percent indicate no pre-conversion analysis happened in their libraries.

Thirty-five percent claimed that they are not aware of any pre-conversion analysis. This could mean no analysis took place or it is not thorough enough to be known to members of staff.

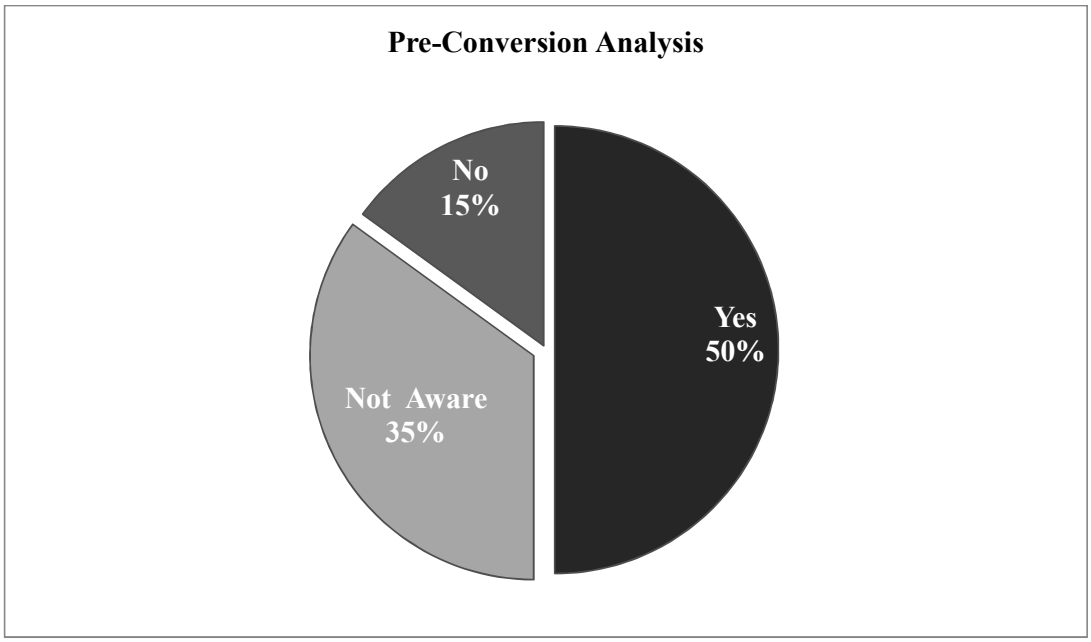

Figure 3: **Pre-Conversion Analysis of the Collection**

Collection Sizes

Figure 4 indicates the collection size of the responding libraries. Nine of the libraries have collections below 20,000 volumes while 6 respondents indicate that their library has collections of above 50,000 volumes. In between these two extremes are libraries with collections that range between 21 to 30,000 volumes (2) and 31,000 to 50,000 volumes (3). It is safe to assume that the reported volumes represent the physical book collections in these libraries. It is probable that, adding the journal collection may increase the reported volume. Being aware of the actual collection volume is essential as a guide in setting objectives and evaluating the

completed conversion project. It can answer the questions of whether the completed OPAC is a true reflection of the holdings of the library or whether it has unearthed hitherto 'hidden' or 'misplaced' bibliographic records.

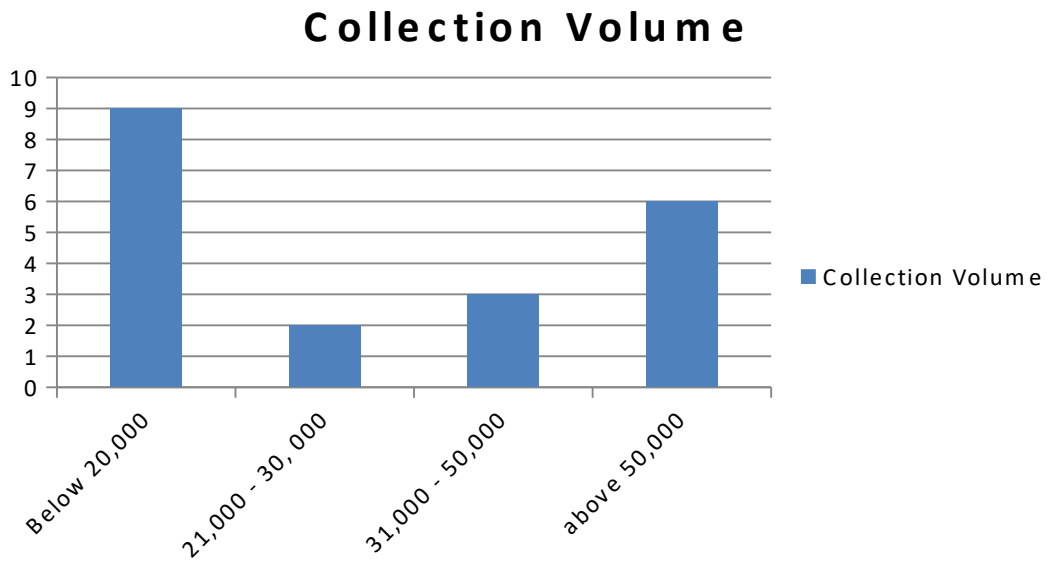

Figure 4: Collection volumes in the responding libraries

Approach to retrospective conversion

Eighty percent (16) of the surveyed library adopted the In-house conversion approach where the library utilizes both the human and material resources available in-house to execute the retrospective conversion project. **African libraries often** choose this method because the cost of engaging Contractors are exorbitant and time to convert data often takes much longer than desired[17]. **Fifteen percent** (3) of the surveyed libraries chose the contracted method. **This method is often preferred because it does not require additional personnel or equipment for the contracting library, nor does it heavily impact existing personnel. Also, if handled effectively, it can be less expensive than an in-house project**[18]. Only 5% (1) of the

responding libraries indicates that they adopted the hybrid approach which involves the utilization of both in-house staff and contracted firms.

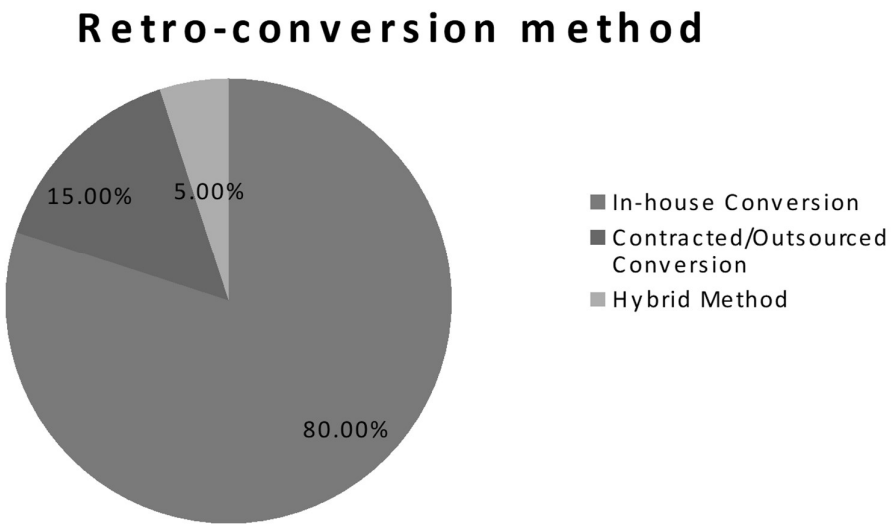

Figure 5: Approach to Data Conversion

Exchange of bibliographic information

The importance of automated libraries in Nigeria to share bibliographic data to enhance development has been highlighted in several studies. Sadly, the efforts to create a National Union catalogue have not yielded any tangible results[19]. With the absence of national initiative towards the exchange of bibliographic data, it is not surprising that 74.2% of the responding libraries indicate no cooperation with other libraries in their retro-conversion project. A further 12.9% percent claimed ignorance of any cooperation with other libraries while only 12.9% actually indicates some sort of alliance with other libraries in their attempt to achieve successful retro-conversion project.

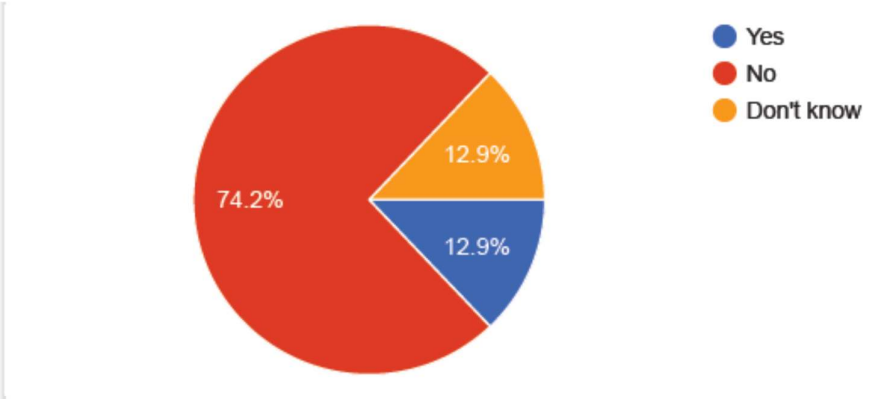

Figure 6: Library Cooperation/Data Exchange

Sources of data for the retrospective conversion

Figure 7 presented data concerning the source of data for the retrospective conversion. It is obvious that catalogue cards and the worksheet prepared by the cataloguing unit is the main source of information (68.8%) followed by the item itself (18.8%). Apparently, the item itself must be used in cases where the catalogue cards and worksheet are lost or damaged or contain illegible/incomplete information. The shelf list is also used as a source of information as a last recourse (15.6%) since the information it contains is also detailed enough.

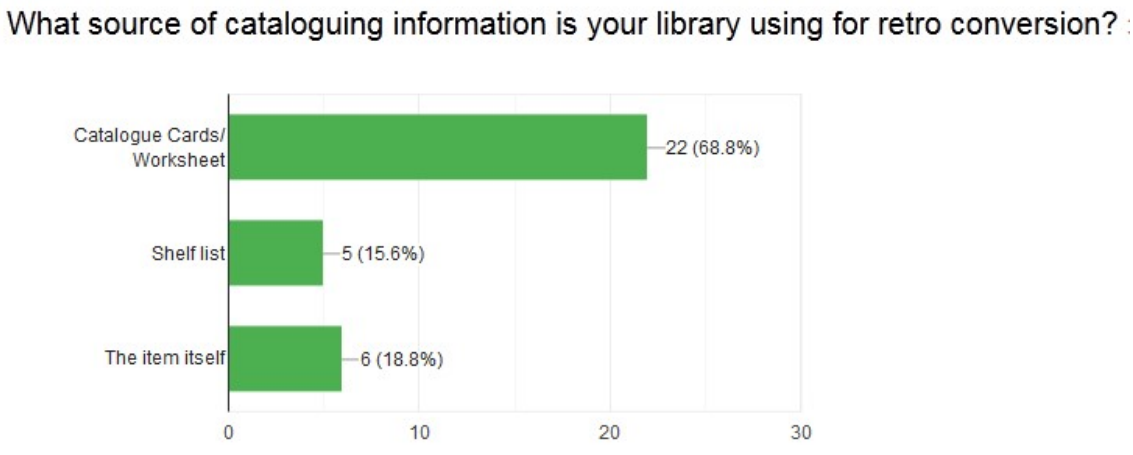

Figure 7: Sources of Cataloguing Information

Items prioritized in retrospective conversion

Due to the high costs of carrying out a retrospective conversion, few libraries can carry out a complete conversion all at once. They therefore must prioritize certain part of the collection. Figure 8 shows that book materials are the most prioritized in retro-conversion projects at 75% response rate. Only one library (3.1%) indicated that they prioritized the serial collections. 21.9% of the respondents indicated that all resources are given the same level of importance during retro-conversion.

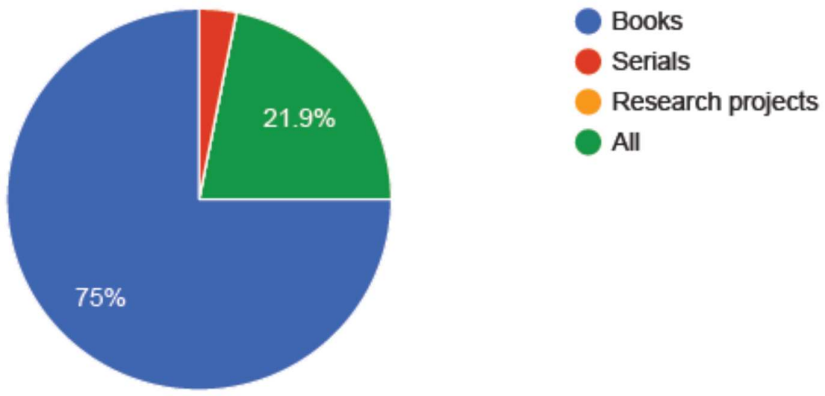

Figure 8: Items prioritized for conversion

Average number of staff involved in retrospective conversion

Figure 9 shows the average number of staff committed to the project by academic libraries Nigeria. About forty percent of the survey respondents committed between 10 to 15 employees followed by 25.8% who assigned between 5-9 staff while 19.4% of the respondents indicated that they committed about 1- 4 of their staff are engaged in the project. Libraries with more than 15 employees constitute 16.1% of the total respondents. This shows that in-house

retrospective conversion is a labour intensive project and libraries must prudently assigned staff to ensure a balance between achieving successful retro-conversion and undisrupted library services to the users.

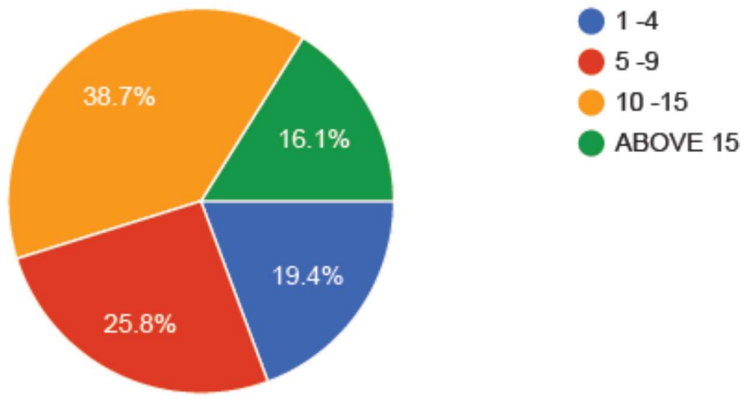

Figure 9: Average staff member assigned to retro-conversion

Category of staff involved in data entry

In view of the staff requirements, it is necessary to know the categories of staff usually assigned by Nigerian libraries to bibliographic data entry onto the OPAC. **Sixty-one percent** (61%) of the respondents involved both professional and Para-professional staff in the library while (25.8%) involve every available hand; professionals, Para-professionals and even students on Industrial Training programs. Just a mere 12.9% of the respondents restrict the operations to professional staff only.

There have been various cases made for the involvement of all available hand in the library. For instance, it has been **narrated how the Arizona State University Library made use of students on Industrial Training and volunteer students to carry out the retro-conversion**

of its East Asian language materials[20]. Furthermore, the involvement of all available staff in the project with the provision that experience and professional librarians oversee the project **can ensure a better project outcome[21]**.

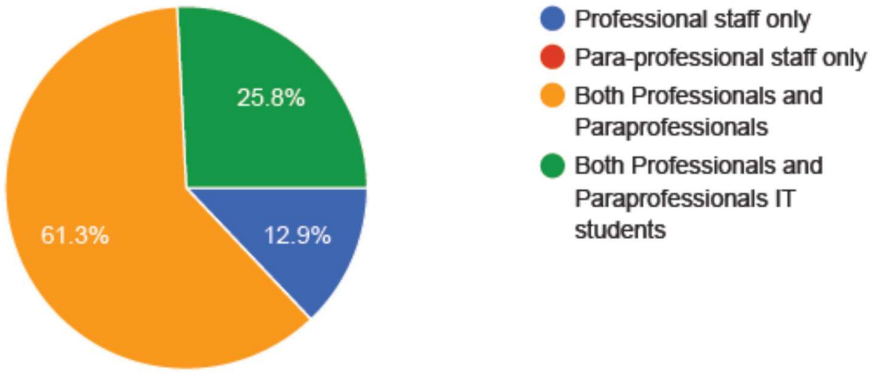

Figure 10: Category of staff involved in bibliographic data entry

Hours spent on data entry per day

Keeping in mind that other library routines cannot be abandoned in the course of the retrospective conversion project, the survey respondents were asked about the hours dedicated to bibliographic data entry daily. Majority of the respondents (46.9%) indicated that they allocate between 1-3 hours daily. This is closely followed by those who allocate between 4-6 hours daily to the bibliographic data entry process. A minority (12.5%) of the survey respondents dedicated between 6-8 hours daily which means **that** staff assigned to the bibliographic data entry task are exempted from other responsibilities throughout the day.

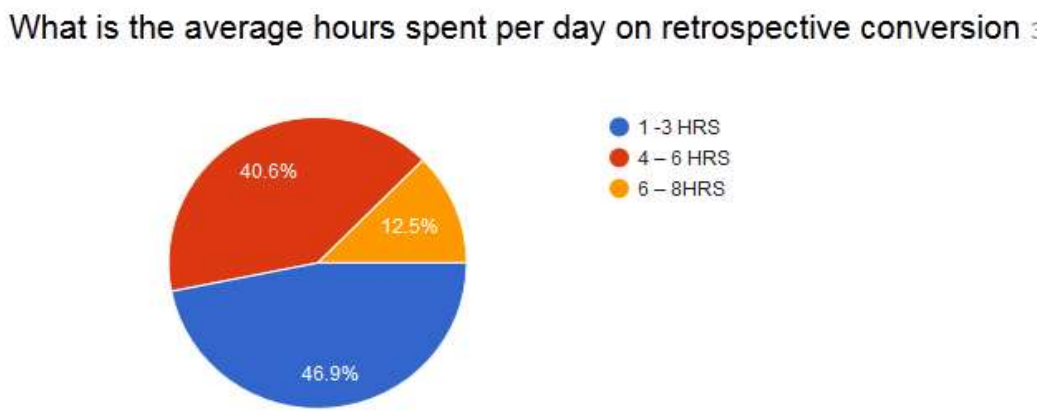

Figure 11: Average Hours Spent on Retro-Conversion Daily

Average records converted daily

It is important to apply project management principles to retrospective conversion activities. Therefore, we asked the **survey respondents** to provide figure concerning the average records converted daily. In 50% of the responding libraries, each staff convert an average of 10 -20 records daily. **About twenty-two percent** of the libraries reported that individual staff converts between 21-30 records daily. In 15.6% of the library, staff converts more than 40 records daily while only 12.5% of the **survey respondents** say their staff average conversion rate daily is between 31-40 records. Having these figures is important for planning and forecasting. When planners combines the numbers of records converted per day to number of staff assigned and the collection volume as well as the number of hours dedicated per day, it is possible to estimate how long it would take to convert a given collection under different circumstances. It is however, important to point out, that number of records converted depends on various factors such as the competence of the staff, nature of the material and the available infrastructure like Internet bandwidth etc.

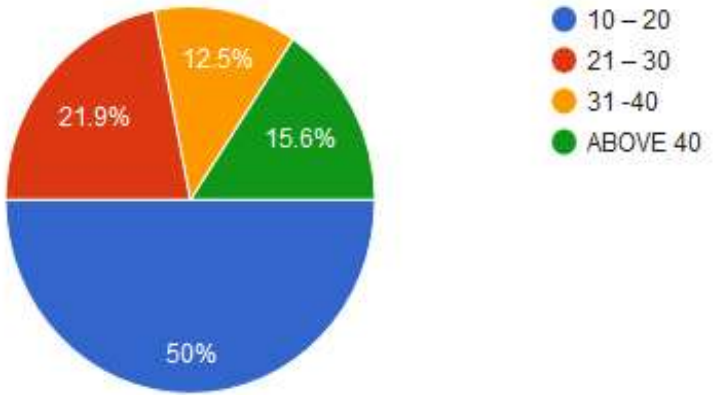

Figure 12: Average Records Converted Daily Per Person

Network preferences

Figure 13 analyses the network preferences among the responding libraries. It shows that majority of the responding libraries (51.6%) use a combination of Local Area Network (LAN) and Wide Area Network (Internet). The remainder is split between those who use just the Internet (22.6%) and those that stay on their Local Area Network (25.9%). For libraries using the KOHA ILS, there is a great opportunity for copy cataloguing through the Z39.50 gateway. Users can search by Author, Title and ISBN among other access points. It is a fast and efficient way for retro-conversion and building the OPAC but it depends on efficient Internet connection. Libraries that use LAN, especially where a dedicated network is created for the purpose of the project can be assured of high speed data migration as they may not experience any downtime as with Internet connection. Erratic or slow Internet connection can frustrate the staff and slow down the work. When the Internet connection is bad or the institution does not subscribe to the Internet, manual conversion is the best option. Each library will therefore choose the option it considers as the most practical under the circumstance.

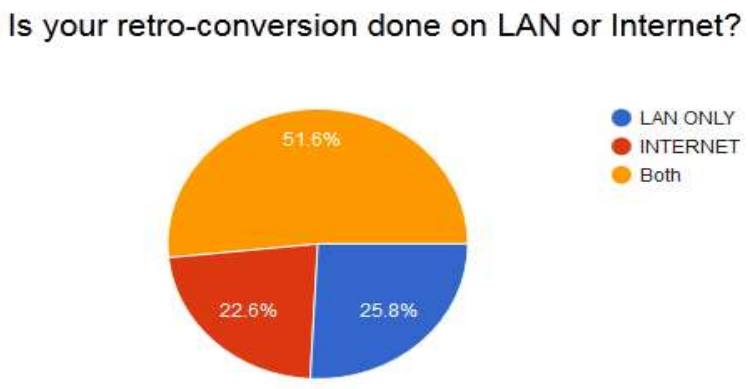

Figure 13: Network Preferences

Challenges faced by Libraries in carrying out retrospective conversion projects

Table 2 outlines the challenges faced by Libraries in carrying out retro-conversion projects. It is obvious that the most significant challenge is that of erratic power supply with a mean score of 3.28. This is closely followed by low Internet bandwidth which has a mean score of 3.00. Other critical challenges reported include 'Inadequate staff' (Mean Score= 2.88) and 'staff apathy' (Mean Score = 2.58). There is also the issue of incomplete cataloguing records which hampers effective and speedy retro-conversion. This factor has a mean score of 2.50. It is interesting to note that 'inadequate funding' is way down the list with a mean score of 2.42. This is probably due to the fact that KOHA is a free software. Also, the issue of computer workstations (Mean = 1.90) is less significant than other challenges. **This is not surprising as studies have reported that many of the libraries already possess computer workstations and other basic infrastructures required for automation and retro-conversion project**[22]. Another less significant challenge is 'lack of proper organisation' which has a mean score of

2.25. This shows that more library administrators are putting effective structures in place to ensure successful retro-conversion projects.

Table 2: Challenges faced in the course of retrospective conversion

	HR	R	SR	NR	Mean	Std. Deviation
Erratic power supply	60% (36)	8% (5)	17% (10)	15% (9)	3.28	1.075
Low Internet bandwidth	53% (32)	13% (8)	13% (8)	20% (12)	3.00	1.221
Inadequate Staff	47% (28)	8 (13%)	20% (12)	20% (12)	2.88	1.195
Staff apathy	33% (20)	11 (18%)	17% (10)	32% (19)	2.58	1.253
Incomplete cataloguing records	33% (20)	13% (8)	25% (15)	17 (29%)	2.50	1.242
Inadequate funding	19 (32%)	8 (13%)	20% (12)	35% (21)	2.42	1.266
Lack of proper organisation	23% (14)	20% (12)	27% (16)	30% (18)	2.25	1.188

Inadequate computer workstation	17% (10)	3% (2)	33% (20)	47% (28)	1.90	1.085

Solutions to challenges faced in the course of retrospective conversion

Each problem affecting a project should be seen as a challenge to be overcome so the survey respondents were asked to state, in their own words, the working solutions they have found to each challenge. The responses varied in wordings but what they pointed reflect the foremost challenges being faced by the libraries. To solve the problem of erratic power supply for instance, the respondents revealed that they have invested in alternative sources of power such as power generating sets, inverters and solar panels. Those who cannot afford these reported that 'we work with what we have' meaning that they work whenever there is power supply.

Among the solution found to the issue of slow internet connection is to host the KOHA Server on a Local Area Network (LAN) for increased speed. The LAN is faster than the Wide Area Network (WAN) and is preferable to those wishing for speed data entry onto their database. Others also resorted to the use of modems and mini routers to achieve a faster internet connection. Both approaches are seen at temporary solutions because an OPAC requires a functioning internet connection.

Another challenge which the survey respondents seem to have found a working solution to is the issue of staff apathy. The solution to this problem seems to be multi-pronged with libraries combining training and development, reorientation programs, effective supervision and mentoring. The solution also involve a bit of 'carrot and stick' with some libraries reporting that they set targets and sanction those who fail to meet them.

Another important approach to solving the emerging issue in retrospective conversion among the survey respondents is collaboration. This happens both formally and informally and it involves tapping the expertise of colleagues and associate institutions to find solutions to various challenges.

CONCLUSION

Despite various challenges, more Nigerian academic libraries are building OPACs through the process of retrospective conversion. It may be a slow and arduous task fraught with various pitfalls and dogged with seemingly insurmountable challenges but these libraries are **developing ingenuous solutions** to ensure that they are able to provide a quick and efficient access to their collections in order to satisfy the contemporary information users. The analysis of the practices and experiences in this study is a veritable source of information for libraries planning to embark on retro-conversion. It is clear that, while majority of libraries adopt the methods that they feel are better suited to their current situation, their successes and struggles can provide a useful insight, both for them and others in the future. Other libraries can use these experiences to gauge their own performance or to avoid potential pitfalls.

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