

## Migration from VTLS to KOHA Library Application Software in Ahmadu Bello University Library Complex: Reasons, Challenges and the Success Story

Umar Ibrahim<sup>1</sup>, John A. Ikwe<sup>2\*</sup> and Abdullahi Abdussamad<sup>3</sup>

<sup>1</sup>Librarian Kashim Ibrahim Library Ahmadu Bello University Zaria, Kaduna Nigeria

<sup>2</sup>Cataloger/Classifier, Resource Processing Division, Kashim Ibrahim Library Ahmadu Bello University Zaria, Kaduna Nigeria

<sup>3</sup>Systems Analyst, Kashim Ibrahim Library Ahmadu Bello University Zaria, Kaduna Nigeria

**\*Corresponding Author:** John A. Ikwe, Cataloger/Classifier, Resource Processing Division, Kashim Ibrahim Library Ahmadu Bello University Zaria, Kaduna Nigeria

### ABSTRACT

Providing an overview of automation project and ILS migrations in Ahmadu Bello University Library, the paper highlights reasons and challenges faced during the various switch over processes. Although the VTLS served the library very well, the rising cost of the software associated with the increase in exchange rate necessitated the library to immigrate from the software. The paper also discusses the critical challenge of data/record retrieval from VTLS to KOHA and how the university library system librarians were able to achieve that without losing any data/record. The paper concludes that the exercise have not only been worthwhile but successful. Apart from empowering library staff with additional skills and knowledge, the migration led to increase in the number of records in the library management system and provides remote access to library holdings via the Web leading to resources sharing and collaboration with other university libraries using KOHA nationally and globally.

**Keywords:** Migration, VTLS, KOHA, Library Application Software, Ahmadu Bello University Library, ILS.

### INTRODUCTION

Application of Computers to perform traditional library housekeeping activities such as **acquisition, circulation, cataloguing and serials controls** connotes the concept of library automation. Automation dates back to the 16<sup>th</sup> century but the present successes are as a result of experiments undertaken in the 1960s by the library of Congress. Automation causes changes in the way people communicate, locate, retrieve, and use information. Today, it is being embraced by many institutions, and thus it can be rightly said that a library is being side lined if not counted as part of those making use of automation system in their individual libraries.

Basically, library automation is achieved through the use of Integrated Library Systems (ILS) also called Library Application Software (LAS). Thus, an automated library is one where computer is used to manage one or several of the library's key functions. It should be noted as pointed out by McMenemy (2006) that the whole essence of embarking on library automation in university libraries is to enhance the need for the libraries to satisfy their clientele, particularly in providing

organized access to information stored in the library and make it possible for these clientele to have access to information stored in similar libraries in Nigeria and the world over.

### APPLICATION OF INTEGRATED LIBRARY SOFTWARE IN AHMADU BELLO UNIVERSITY LIBRARY COMPLEX

The Ahmadu Bello University Library Complex is one of the largest library in Africa, south of Sahara. It has a large collection that is housed in the main Kashim Ibrahim library at Samaru, as well as in fourteen other satellite libraries. Nock (2006) reported that the library has about 1,200,000 volumes, comprising books, non-book materials, journals, etc. The desire to have a system to manage and provide easy access to this collection brought about the drive for deployment of library software. Therefore, according to Omoniwo (2001) the idea of library automation in the Ahmadu Bello University Library started way back as 1972 with the automation of its serials record by the computer centre of the University. The need to undertake full library automation by the Nigerian university was further exploited by

a window of opportunity provided in 1989 when the World Bank provided funds to 30 federal universities in Nigeria for the acquisition of books, journals, and equipment, including computers. This encouraged the universities to embrace information and communications technology because the continued magnitude of information resources being passed physically and on the web each day presents an unprecedented challenge to the profession in terms of traditional ways of organizing, providing access to, and preserving information.

However, as pointed out by Bozimo (2006), serious automation efforts in Nigerian university libraries started in mid 1990's, with the university libraries in Nigeria cashing in on the opportunity presented by the World Bank project organized and executed by National Universities commission (NUC) in the 1994/95 session to kick start automation projects. NUC donated computers to university libraries in Nigeria and encouraged them to acquire TINLIB software for their automation project. Unfortunately the use TINLIB software in the Nigerian university libraries did not last for long. Lack of adequate maintenance support and technical guide made most of these libraries abandoned it early for other software. In line with this Ahmadu Bello University Library adopted ALICE for Windows. Again, the use of ALICE for Windows software also suffered the same fate as TINLIB software. ALICE for Windows software was criticized as being a school library system that did not meet international standards. In addition, the institution generally suffered from lack of reliable electrical systems and had only 2MB or less bandwidth to the Internet. Therefore, these problems and others like funding called for **implementation of a new Library Management System** Ahmadu Bello University Library

### **MIGRATION TO VTLS BY THE AHMADU BELLO UNIVERSITY LIBRARY COMPLEX**

A review of literature on LAS migration or what some literature term as switch over Dauda (2017) indicates the practice is not only limited to libraries in the developing countries. Wang (2009) conducted a survey of U.S. Academic Libraries with Migration Projects in 2009. The study provides an overview of top ILS vendors that have announced ILS migration contracts, as well as opinions and insights from library directors, systems professionals, and other key personnel. Similarly, Imo and Igbo (2011) and Adogbeji, Nwalo, Vera and Toyo (2013) looked at challenges

of software use and migration in Nigerian University Libraries in which they discovered the practice among many academic libraries in Nigeria that led to high turnover rate of use of LAS in these libraries. Evidence in one of the study shows that more than 75% of the University libraries surveyed have migrated to more than one software in less than six years in their automation project, with most making use of seven types of software, namely TINLIB, GLAS, Alice for Window, Lib+ (X-Lib), Virtua, E-Lib. SLAM and CD-ISIS.

Many reasons have been attributed to this frequent switch over. For instance, Adeyemi (2002) mentioned scarcity of systems analysts and absence of dedicated commitment to automation on the part of the management, Adedigba and Ezomo (2003) pointed out dissatisfaction with the effectiveness of the existing software. While Imo and Igbo (2011), and Adogbeji, Nwalo, Vera and Toyo (2013) attributed frequent change over to inadequate technical support for the software, high cost of maintenance and Nigeria universities libraries dependability on free and donated software for their automation projects. Collaborating these findings, Iroaganachi, Durodolu and Omatseye (2016) and Dauda (2017) studies revealed lack of in-depth feasibility study and testing of the products, restricted authorization for different operations, limits of access and lack of knowledge of the procedural financial switching costs of ILS as some reasons ascribed to migration. Way back, Omoniwa (2001) argued that the big mistake made in the planning and execution of automation project was that no budget back-up was provided for the initial attempts. He also noted that the NUC initiative for Federal Universities failed because the project was not backed up with funding

It is interesting to note that this time Ahmadu Bello University Library took into consideration all the above mentioned reasons in migrating to VTLS with the view of avoiding any so that sustainable software can be adopted. In their strategies for sustaining software use in Nigerian University libraries, Imo and Igbo (2011) suggested purchase after study and evaluation of software in question, collaborating with ICT bodies and experts to identify quality software and involving library staff and management in software acquisition. They further argued that collaboration with ICT bodies and experts in identification of quality software will enhance the development and creation of cultural profiles for social groups of data/information or knowledge organizers, which will have the advantage of

## Migration from VTLS to KOHA Library Application Software in Ahmadu Bello University Library Complex: Reasons, Challenges and the Success Story

facilitating the linking of these groups remotely to achieve the eventual goal of providing access to information for their various users. Also group members are likely to operate on software platforms that are the same or at least compatible with each other based on international metadata standards.

Chronic underfunding of higher education aggravated by continued growth in student enrollment and prolonged economic stagnation prompted the John D. & Catherine T. MacArthur Foundation and Carnegie to give the Mortenson Center for International Library Programs at the University of Illinois a grant to provide professional development and technical assistance to six university libraries in Nigeria. These universities are: Ahmadu Bello University, Zaria (ABU), Bayero University, Kano (BUK), University of Ibadan, Port Harcourt University (Port Harcourt), University of Jos, Obefemi Awolowo University. This grant was provided in 2006 and meant to improve the information and access to the information needed for the researchers and students at each of the universities, (Breeding & Marshall, 2012)

Although VTLS was a product of donor agencies but for the first time the selection of the software was done by a team in which the university librarians were fully involved. Following feasibility study and identification of three best library management vendors; Ex Libris, Sirsi/Dynix and VTLS, a presentation was done by each to a team consisting of the representatives of the grant agencies and the librarians for the selection of the best software. After the presentation and extensive deliberations, Virtua a product of VTLS Inc. was finally selected and adopted by the six university libraries. Virtua was adopted because apart from being robust software with well developed features, a lot of technical expertise work has been injected towards its development, which is especially seen in the brevity of space for its interface and yet well designed to accommodate data/record. No wonder Bozimo (2006) was so elated when Ahmadu Bello University Library migrated from Alice for Windows to Virtua, noting that the University library will be migrating “to more sophisticated software called the VTLS”

### IMMIGRATION FROM VTLS BY THE AHMADU BELLO UNIVERSITY LIBRARY COMPLEX

The indisputable qualities and richness of VTLS have no doubt endeared well not only to Ahmadu Bello University Library but also to all the other participating libraries. This is evidence

in the number of years the libraries stayed with the software. While some literature indicated most libraries using LAS for five years before switching to another, all the participating libraries used VTLS for more than ten years. Yet in spite of the richness of the features of virtua some problems began to pop up as the usage progressed. Initially, out of the 20 units of **Thin Client**, (diskless workstations used to access the **OPAC**) bought with the Macarthur fund, only ten were used and later when the library upgraded the system they all became obsolete. **The Sun server** machine brought in By JKK a computer hardware vendor in Lagos hardly finished the first five years before it broke down necessitating the University to use its funds to replace it with a new **Dell server**. **And because the new Dell system** came with **RED Hat OS** unlike the previous one with **Sun Solaris**, **the Red Hat license** was required to be paid for annually for support, again the university had to fund this (Uba 2015). The transition to this new system made the library to lose huge data.

At take off of VTLS, the database usage License permitted only 20 simultaneous users, meaning only 20 people could log in at a time. This restriction slowed down the retrospective conversion program whereas the library had on ground very enthusiastic staff that was trained and willing to make input into the database. The library went for an unlimited license at additional cost. To rectify the fault on screen that always read “**maximum user reached,**” which data entry staff became worried and another peculiar connectivity problem in which constant **Socket error** would be displayed on the screen, the university had to pay for extra space in order to overcome the limitations of these messages. In addition to the problems listed above, the rising tide of exchange rate made it practically impossible for the library to cope with the continued subscription. Thus at the expiration of the second five year subscription in 2018, the library could not raise the required fund for another renewal because the amount was in the range of about forty eight million naira. It is sad to note that it is this last singular problem that made Ahmadu Bello University Library and other participating libraries to seek out for another software.

### REASONS AND CHALLENGES OF ADOPTING KOHA BY THE AHMADU BELLO UNIVERSITY LIBRARY COMPLEX

When it became inevitable for Ahmadu Bello University Library to migrate to software, a committee of well experienced library staff,

particularly those that worked with previous software was set up. This committee was first mandated to interact with the other five university libraries using Virtua with the aim of finding out their current situation. The committee was equally requested to carry out feasibility study, including inviting vendors for demonstration; having in mind all the reasons attributed to software migration, in order to select the best LAS for the library that will over stay the period of VTLS.

The committee dismayingly discovered that all the other participating university libraries have since abandoned VTLS, of course for the simple reason of lack of funds to sustain the subscription. The result of the feasibility study recommended the adoption of KOHA software. Many literatures such as Vimal Kumar and Jasimudeen (2012) and Omeluzor, Adara, Ezinwayi, Bamidele and Umahi (2012) have provided reasons for the adoption of KOHA software by libraries. Apart from Koha being web-based integrated library system capable of managing a wide range of administrative processes typically found in modern libraries: cataloguing, authority management, serials management, circulation, acquisitions, reporting, etc, Koha is compatible with various international library standards, such as, MARC21, UNIMARC, MARCXML, ISO 2709, Z39.50, SRU/SRW, SIP2, RSS, etc.

Another advantage of the software is that it is implemented in thousands of libraries around the world, from small personal libraries with a few hundred items to large university libraries holding millions of items. Therefore, there is a vibrant community of developers working to improve Koha's security, stability and permanent with new features coming out every year making it the most advanced open-source library system on the market today. The fact that almost all the former five VTLS users have migrated to KOHA with many Nigerian University libraries already on KOHA and more ready to join, made the choice of the software by Ahmadu Bello University Library imperative. By adopting KOHA, Ahmadu Bello University Library can continue its cooperation and collaboration with the former members of VTLS family, the other Nigerian University libraries already on KOHA, as well the larger community of KOHA users globally.

However the most critical challenge in adopting KOHA faced by the Ahmadu Bello University Library was the issue of data/records migration from VTLS to the KOHA. The University library has over the years of VTLS usage generated over

162,822 bibliographic records, 204,724 item records bar coded and 3,866 in the Authority File Records. Therefore migration to any software that would not accept these records will make the automation project of the library disastrous. Unfortunately all the software demonstrated failed in this regards. Initially KOHA also probe difficult because VTLS being proprietary **software makes use of ORACLE 10G OS whose maintenance fee was paid by the Vendor. It had some features elaborately displayed while some others were hidden. The interface differs from that of KOHA which uses My SQL OS. Because of the hidden nature of some of the features of VTLS, the barcode fields/tags could not initially be extracted with the rest of their corresponding records.**

Fortunately VTLS and KOHA make use of MARC 21 format and one of the greatest advantages of the format **is its ability to present records whose structure; identity and integrity do not change or depreciate when transferred from one place to other or from one system to the other. The organization of data within fields and subfields according to Ikwe (2008) and Das (2009) make room for specificity which facilitates manipulation and retrieval of data within machines.** This advantage was brought to play in the extraction of records from VTLS to KOHA by the university library systems librarian after a careful study of the use of fields and their tags with the catalogers. With repeated trials the extraction was completed and uploaded to KOHA. However, a locally defined tag was created for the barcode in KOHA. In addition, the system staff also created accounts in KOHA for the patrons that existed in Virtua.

### **THE SUCCESS STORY**

The success story of migration from VTLS to KOHA by the Ahmadu Bello University Library lies in the fact that no data/record was lost in the switch over process. The process also did not last long and VTLS was still in use during the migration, hence users did not suffer any denial. Apart from empowering library staff with additional skills and knowledge, the migration led to increase in the number of **records in the library management system so that users can find and check out library materials making patrons to log on to the bibliographic database and make their searches as easily as possible to obtain information on their needs.** It can also provide **remote access to library holdings via the Web** leading to resources sharing and

## Migration from VTLS to KOHA Library Application Software in Ahmadu Bello University Library Complex: Reasons, Challenges and the Success Story

collaboration with other university libraries using KOHA nationally and globally.

### CONCLUSION

The paper discussed the application and frequent migrations of ILS in Ahmadu Bello University Library. Although VTLS served the library and other participating university libraries very well, the paper concludes that immigration from VTLS had to happen to all the participating university libraries and this time around funding was the only main reason ascribed to the switch over. The ability to retrieve all the data/records from VTLS to KOHA and joining the larger community of KOHA users globally marks the success of the migration process.

### REFERENCES

- [1] Adedigba, Y.A and Ezoma E.O. (2003) Management of system migration African Journal of Library and information science Vol. 13. No. 1 Pp 33
- [2] Adeyemi, B.M. (2002). Problems and challenges of automating cataloguing process at Kenneth Dike University of Ibadan, Nigeria: Africa Journal Library and Information Sciences
- [3] Benson Oghenevwogaga Adogbeji, Kenneth I. N. Nwalo, Okonoko, Ngozi Vera and David Oghenevwogaga Toyo (2013) Software Migration in Selected University and Special Libraries in Nigeria International Journal of Academic Research in Business and Social Sciences 3 (4)
- [4] Bozimo, Doris O. (2006). ICT and the Ahmadu Bello University Libraries. *Nigerian Libraries: Journal of the Nigerian Library Association* Vol. 1-20
- [5] **Breeding & Marshall (2012), Lib-web-cats, available at: <http://www.librarytechnology.org/lwcprocessquery.pl>** (retrieved 2 May 2012)
- [6] **Dauda, Idris Adamu (2017) Implications of Integrated Library Systems (ILS) Switching Costs in Nigerian University Libraries Unpublished M. Sc Thesis. Zaria: Department of Library and Information Science, Ahmadu Bello University**
- [7] **Das, S. K. (2009). Fundamentals of MARC 21 Bibliographic Format: New Delhi, ESS Ess Publications**
- [8] Ikwe, J.A (2008) MARC 21 and the Use of Linear Separable Connectors *Library and Information Management Forum* Vol.12 no 1
- [9] McMenemy, David (2006). Reviewing libraries and librarianship: what has changed in 80 years? *Library Review*, 56 (1 & 2) 8 – 11.
- [10] Nock, G (2006) **The Challenges of Computerising a University Library in Nigeria: The Case of Kashim Ibrahim Library, Ahmadu Bello University, Zaria.** *Library Philosophy and Practice* Vol.
- [11] Nwabuisi T. Imo and Uche H. Igbo (2011) The Challenges of Software Use in Nigerian University Libraries: Review of Experiences from 1990-2009 *Library Philosophy and Practice*. Retrieved from <http://unllib.unl.edu/LPP/> on 10/3/2019
- [12] Omoniwa, Moses A. (2001). The computerization of the Kashim Ibrahim Library of Ahmadu Bello University, Zaria 1972 – 2001. *Nigerian Libraries: Journal of the Nigerian Library Association*, 35 (1) 15 - 22.
- [13] Saturday U. Omeluzor, Olugbenga Adara, Madukoma Ezinwayi, A. Itunu Bamidele and Felicia Oby Umahi (2012) Implementation of Koha Integrated Library Management Software (ILMS): The Babcock University Experience Canadian Social Science 8 (4) pp. 211-221 DOI:10.3968/j.css.1923669720120804.1860
- [14] Uba, Umar.(2015) VTLS - VIRTUA the Story so Far. A paper presented at the Committee Room of Kashim Ibrahim Library, Ahmadu Bello University, Zaria
- [15] Vimal Kumar, V and Jasimudeen, S (2012) Adoption and User Perception of KOHA Library Management System in India *Annals of Library and Information Studies*, Vol. 59 pp 223 -230
- [16] Zhonghong Wang (2009) Integrated Library System (ILS) Challenges and Opportunities: A Survey of U.S. Academic Libraries with Migration Projects *The journal of Academic Librarianship*, 35 (3) pages 207-220

**Citation:** Umar Ibrahim, John A. Ikwe and Abdullahi Abdussamad, "Migration from VTLS to KOHA Library Application Software in Ahmadu Bello University Library Complex: Reasons, Challenges and the Success Story", *Research Journal of Library and Information Science*, 4(2), 2020, pp. 42-46.

**Copyright:** © 2020 John A. Ikwe. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.