

AUTOMATING LIBRARY RECORDS USING GLAS SOFTWARE: THE UNIVERSITY OF LAGOS EXPERIENCE

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ABSTRACT

This paper discusses the automation of University of Lagos library records using The Information Navigator Library Software (TINLIB) and now Graphical Library Automation Systems (GLAS) software with some analysis of the cataloguing module. It discusses the rationale behind the change from TINLIB to GLAS by assessing the features, strength and weakness of both software. Plan for future development is discussed and Nigeria university libraries using the same software are advised to form themselves into consortium for resource – sharing. Agreement for regular servicing and maintenance of software between vendors and libraries is recommended.

INTRODUCTION

Library automation no doubt offers many opportunities to improve library services to library patrons. It makes materials easier for patrons to locate as well as allow staff to serve patrons better by facilitating a multitude of tasks such as cataloguing, acquisition, circulation and reference.

Aina (2004) emphasizes that a library is concerned with the collection, processing, storage and dissemination of recorded information for the purpose of reading, study and consultation. He stresses that for any library to attain this goal; many activities are performed by a library that translates to library and information services.

Automation of library resources is the reality of the 21st century. It makes libraries smart and offers many opportunities to improve services to library patrons. Information Technology has been found to be applicable to all facets of library operations. Library automation, information and communication technology (ICT), information super highway etc, are the languages of the 21st century. The use of information technology especially in libraries cannot be over-emphasized because an automated library has the potentials for satisfying library patrons' needs beyond the capabilities of the manual system.

In most university and research libraries in Nigeria, some of the major software packages often used in the automation of libraries, archives and information centres include:-

- (a) CDS/ISIS
- (b) X – LIB
- (c) TINLIB
- (d) GLAS; and
- (e) ALICE FOR WINDOWS

In Nigeria, major developments and achievements in the use of automated system have been mainly in the academic and research libraries. Adeniran (1998). A number of libraries in Nigeria had attempted to automate their operations in the early 70's and 80's. The literature of these efforts is replete with tales of flops and unsuccessful implementation, Nevertheless, success has been recorded earlier and this was mainly in some foreign owned or sponsored libraries such as the International Institute for Tropical Agriculture (IITA), library, the British Council library, the United States Information Services (USIS), library and some Nigerian University libraries like University of Ibadan, University of Jos and few others.

Okiy (1999) stated that The Kenneth Dike Library of the University of Ibadan and Hezekiah Oluwasanmi Library of the University of Obafemi Awolowo University, Ile-Ife and University of Jos are examples of the very few University Libraries which has automated their service to a large extent while other libraries such as the Ahmadu Bello University, University of Ilorin and the University of Lagos are at various stages of automating their services. Oketunji (1998) posited that automation has now become a reality, which nobody can neglect if he wants to follow and benefit from the recent trend in information technology in order to provide more efficient and effective services to his used.

In South Africa, Tsebe (2001) reported the use of major packages by higher Institutions that form consortia. Such software packages adopted include INNOPAC, URICA and ALEPH systems, while Msuya (2001) reported the changes in the work environment t since automation at the University of Dar es Salaam Library, Tanzania, the ADLIB software is used.

Eyitayo (1996) agreed that automated library system has enormous potential in the management of vast resources available in the library. Access to these resources is facilitated and the rising needs of library patrons can then be met effectively and efficiently.

Hisle (1996) observed that the massive intrusion of technology into our profession would force changes in the way librarians and support staff do their jobs and interact with users and colleagues.

Russell (2002) acknowledged that information and communication technology has dramatically altered the process of teaching and scholarly research. Paradigmatic shifts resulting from the introduction of new and evolving technologies will continue into the 21st century. He emphasized that libraries must come to terms with their reliance on digital technology as the primary means of creating and storing their own organizational record.

The plan to automate the University of Lagos Library was conceived barely ten years after the University library's door opened to the public on October 2nd 1962. The interest then was to ease the problems affecting research, teaching and learning. To effect this, the University of Lagos library management considered the computerization of some of its operations and the series of activities in this direction culminated the commissioning of a Plessey library lending systems in September, 1976. For technical reasons, some of them, regrettably, turned out to be still born babies (Adediji 1997).

It is however, to be noted that prior to the installation of the Plessey system; some areas of the library operation had been mechanically driven. A sizeable number of the collections like theses; newspapers, documentaries, instructional materials etc were acquired in microforms. Others are Se-Lin Tape Labeller for the classification number of the spine of books. Catalogue

cards were produced with the Weber machine; accessioning of books was done with a numbering machine, etc.

ADOPTION OF THE INFORMATION NAVIGATOR LIBRARY SOFTWARE (TINLIB) SOFTWARE IN UNIVERSITY OF LIBRARY

Under the National Universities Commission (NUC)/World Bank credit facility agreement of 1991, the Federal Universities were supplied with books, journals and one micro computer and a 4 – user Local Area Network (LAN) version 270 of The Information Navigator Library Software (TINLIB) for use in Federal University Libraries. Oduwale, Oyesiku & Labulo (2002) said the choice of TINLIB software was made by the Committee of University Librarians of Nigerian universities (CULNU) because of the ease of operation of the systems which has modules for acquisitions, cataloguing, serials, circulation and report generation, all of which operate as an integrated unit. University of Lagos library as one of the beneficiaries of the new technology took the giant leap to make the automation of its operations a reality. The gradual computerization of the library and digitization of its records started at that time. Library management set up a committee charged with the planning and implementation of library Automation programmes/projects.

The team recommendation and got approval from the University for the installation of a 50 – user Local Area Network (LAN) in a Netware 4.1 Operating system environment and an upgrade of TINLIB to version 280 with 25 – user facility and these was installed in March, 1996. With the LAN in place, Library search for a variety of databases became possible. By July 1999, the library systems were configured to access the web, giving the library full Internet Connectivity.

Series of training programmes were arranged for professional librarians, Para professionals and secretarial staff who operate the system on the use of the software. The library acquired about 20 computers distributed among sections. Though some of the computers are used for administrative record keeping and technical processing of the materials, what is important to note at this point is the extent of entries already keyed into Catalogue database using YINLIB software. As at 2001, the library already had over 34,000 entries in the database.

THE INFORMATION NAVIGATOR LIBRARY SOFTWARE (TINLIB)

Fatoki (2002) and Okoye (1998) in their submission on the selection of libraries software to be adjudged suitable, it should have requirements of memory, disk – storage, search facilities, print formulations, affordable cost and program utilities incorporated. Burton and Petrie (1991) also stressed that the software should be user-friendly, possess ability to allow records to be created and transferred from one module to another. Based on these submission, the author compares the two software that the University of Lagos Library has used in automating its library records.

TINLIB no doubt, is a turn – key library specific software, detailed, versatile, user friendly because it provides more access points. It is tailored to meet the needs of libraries and would have been ideal to continue if the manufacturer has launched an upgraded version. It is an application of the TINMAN relational database management system that was developed by Information Management and Engineering Limited (IME) of London. It is an application

software that is made up of files containing data. The database itself contains fields. Fields in turn contain the data that make up the database. It is Dos-based software.

FEATURE OF TINLIB

- Its features include browse and navigate search facilities which allow users to introduce relational data techniques to link information drawn from a number of fields, including author, corporate body and class mark or the thesaurus term.
- TINLIB has “query by search” technique in which it combines searches for different data in a variety of fields into the search. For example, it’s easy to search for all titles by one author or publisher and on a specific subject.
- Standard reports for example are available within TINLIB modules and this is considered valuable because it provides useful management information which is almost impossible to obtain from a manual system.
- Outstanding features of TINLIB software is the ability to offer relational structure, full-screen editing, unrestricted fields and records, unique ‘navigation” searching, online authority control using window portion of specific files and copy data from the window into the text of the records. The entry input template in TINLIB display a list of field tags on the left hand side of the screen and search tags names a bibliographic field into which data could be entered easily.
- TINLIB has four modules viz; Cataloguing, Acquisitions, Circulation and Serials. The cataloguing module has seven option menus:
 1. Document titles
 2. Author/Editors, etc.
 3. Subject/Thesaurus
 4. Publishers/Distributors
 5. Classification
 6. ISBN, etc.
 7. catalogue – Reports
- Bibliographic information display in TINLIB is very detailed. However, it is not a window based software and this has been seen as its greatest deficiency.

GRAPHICAL LIBRARY AUTOMATION SYSTEMS (GLAS)

This library software introduced in 1996 is an improvement on TINLIB by Electronic Online Systems International (EOSI), manufactures of TINLIB.

GLAS is a window-based system and its compatibility allows users to open multiple records, perform multiple tasks or open GLAS modules concurrently – all on the same workstation. Its modules may be moved to a different program or set to run minimized when selected. GLAS is a modular system which is made up of folders containing records. It moves effortlessly between cataloguing module tasks. One can cut, copy or paste information from one record to another and change the size of the module or window, reduce it to an icon or exit using dropdown menus, standard shortcut keys or by clicking on convenient toolbar buttons. Browsers are offered throughout the module to allow users to add information to the selected cataloguing

file or to select information from the file. GLAS has five modules viz: cataloguing, Acquisition, Circulation, Serials and Databridge.

FEATUREOF GLAS

- Help to increase staff productivity by enabling them to several windows at once to perform a variety of library function.
- It provides powerful “Easy Search browsing utility thereby giving workers quick and easy access to knowledge assets contained in the online catalogue complete with cross reference display.
- Users can actually specify their own search strategies using the Boolean searching techniques or browse on a specific index, by title, author, subject, call number, series and added entries. Boolean searching techniques allow specific search strategies to be built and executed.
- As it is window based, patrons with no library training and little experience using library system can use it effectively. Experienced users can also select advanced searching features for more sophisticated search retrieval.

The following, are features that makes window-based system more user friendly than the DOS:

- **Consistent User Interface:** Since programmes design their applications to fit within the windows user interface, you will already know how to start most of the applications you buy for Windows. You will spend less time learning how to use your applications and more time getting productive work done.
- **Multitasking Capabilities:** This gives you the ability to run two or more applications simultaneously.
- **Data Transfer Capabilities:** The windows Clipboard utility is used to exchange graphics, scanned images or text between applications. In windows, the Clipboard holds this information as you switch between windows.
- **Desktop Accessories:** Windows offers several accessories and utilities you will want to use every day.
- **Increased Productivity:** Windows bring you a working computer environment that offers software integration, speed and ease of use. Most of the tasks normally performed at the DOS level with obscure and nearly extinct commands can be performed with a few clicks and drags of the mouse in windows. It is easy to remember how to perform an operation because the pull-down menus are always there to remind you.

RATIONALE FOR THE CHANGE TO GLAS

In year 2000, University of Lagos Library management agreed to migrate from TINLIB to GLAS software based on the under listed reasons:

1. GLAS (Graphical Library Automation System) is an improvement on TINLIB by the same manufacturer because it is window-based.
2. TINLIB is menu-driven software with extensive use of the function keys to invoke particular tasks, such as 'insert' new data or to 'validate' data in a field and press f10 to display menu. This appears very cumbersome because the idea of automation was for library patrons to get access to information required as quickly as possible and not for them to start mastering the use of the function keys. The truth of the matter is users feel frustrated, puzzled, fatigued, disappointed, anxious and lost when they cannot easily manipulate the system to get what they are looking for in the library.
3. Search terms in TINLIB are controlled by the scrolling lists i.e. the use of the skip function (F10 key) to open up where you type in the first few letter of the search term. It is purely DOS-based and windows have become the universal platform of interaction with other systems.
4. Ability for GLAS software to perform multi-tasking functionality.
5. Inability of TINLIB to import data from window-based software. It can only import data from CDMARC.
6. Issue of retrospective conversion of the University of Lagos Library records to machine-readable format has been an Herculean task. From 1994 to 2000, all books received were processed with TINLIB and entered into the library database; hence the library has been faced with the task of converting manual records from inception to 1994. TINLIB does not have the import – export module. GLAS though has the 'DATABRIDGE' module for import and export but it was not activated.
7. The development of information technology has actually overridden the advantages of TINLIB where one must memorize commands. Windows offer many features that benefit both new and experienced PC users.

University of Lagos library holdings of over 340,000 volumes, apart from entries already input in TINLIB are being gradually and steadily keyed into GLAS for the On-Line Public Access Cataloguing (OPAC) that has finally been set up. This facility is working side by side with the traditional card catalogue of library system and provides exciting services that technology provides. The content of the cataloguing database does not represent the total library holdings. Presently, the number of records in TINLIB is 34,000 titles while 17,000 entries are in GLAS cataloguing database. Librarians and data processing officers are inputting mainly new books catalogued and few old books that are constantly in circulation by users thereby adding to the volume of titles in the cataloguing database. Six systems were used for the OPAC. Plans are on to acquire more systems and conclude the retrospective conversion process for the OPAC to be officially commissioned.

ADVANTAGES OF GLAS SOFTWARE OVER TINLIB

1. **Powerful Searching:** GLAS (Graphical Library Automation Software) has the ability to perform search strategies. Users can specify their own search strategies using the Boolean search techniques.
2. **Graphical User Interface (GUI):** Requires a computer mouse and enables movement to any area on the screen. Using GLAS software, you can often drop-down windows which open as one navigates to a particular area on the screen.
3. **Networkability:** it can be used on any of the Microsoft window products and navigation is easy.
4. **Help Facilities:** This appears in every window opened; just click on help on any browser tabs to access the help files, which give context – sensitive help materials.
5. **Integration:** GLAS integrates other library functions/modules that shares one bibliographic database. Records in the catalogue file are available for use in acquisition and vice versa. One feature of integration is the appearance or otherwise of circulation status.
6. **User Friendly:** The system is user friendly and it is easy to learn. Patrons with no library training and little experience using library systems can use it effectively.
7. The system automatically back up the data. It also rebuilds everyday to keep the file intact.
8. It is flexible and comprehensive. It actually encompasses all library operations and gives room for modifications where necessary.

DISADVANTAGES OF GLAS

These are some disadvantages observed that GLAS software has over TINLIB.

1. It does not make provision for corporate authors, conferences and meetings etc. But for corporate bodies, the use of Authority Code © will flag the term as corporate in the author authority index. There is also no provision for Editor. Cataloguers, using the modules have adopted the use of (ed.) as code interpreting the author as editor. TINLIB is more comprehensive because all these were specified in the template.
2. There is no field for place of Publication. What we do is to put the place of publication after the Publisher in bracket. Without this, the bibliographic and hardcover having information would have been incomplete.
3. There is no provision for Multiple ISBN No. The same title could have multiple ISBN number if the library for instance; purchase multiple copies in paperback and hardcover having different ISBN number.
4. “See Also” references do not automatically show up in records except one goes through the Authority Index. The Authority term are added to the corresponding index when a new term is added to a bibliographic record. The term will be added to the index when the new entry is processed into the cataloguing database or when the existing record is saved.

5. The software makes no provision for parallel titles i.e. titles in foreign language.
6. Records without personal or corporate authors such as periodicals will only show up in the catalogue with the author field included blank. This will only be giving the impression that perhaps it was left out accidentally but should really be there.
7. The Databridge which is the fifth module that makes it possible to import and export data was not highlighted.
8. Cost implication. The cost of the software is exorbitant and might not be easily affordable by many libraries in Nigeria.
9. GLAS technical support is inadequate. A strong customer support is an essential component for total client satisfaction but GLAS manufacturers and local vendors have no viable support-training package for its users. At the University of Lagos, we have just been able to set up the cataloguing and serials modules.
In spite of all these inadequacies, the system is very user-friendly and this is its biggest advantage.

MAJOR CHALLENGES IN THE AUTHOMATION PROGRAMME

Some of the challenges encountered in the library in achieving full automation are:

1. **Lack of adequate finance:** The current downturn in the Nigerian economy has affected the educational sector and libraries are no exceptions. Lots of equipment and manpower are needed for successful automation of library services. The \university of Lagos library like other academic libraries in Nigeria is under-funded. The Library Development Fund is no more a reality as universities have to depend on the support which the Vice-Chancellors can give from the limited resources.
2. **Shortage of manpower:** This was a major problem. Full library automation requires a large number of staff participants especially to input data to really make it a success.
3. **Lack of skill by some professional librarians:** Automation requires that those who are going to operate the electronic systems possess a certain level of knowledge and skill to be effective in the expectation of what automation has to offer. Majority of librarians are trained in the traditional methods of librarianship. Though information technology, automation of library service are included in the module in library schools but these are not taught effectively. Information technology is the language of the 21st century. Thus librarians need to continuously update their skills to be able to function maximally in an IT environment.
4. **Power Outage:** The nation for the past few years gas been experiencing power outage. There had been problem with the generation and distribution of power by Nigerian Electronic Power Authority (NEPA). The University has a central generating plant and a standby generator, which helps to reduce the problem of power outage.

5. **Occasional system failure:** The system occasionally breaks down and would be out of use for few days before the consultants come to rectify the faults. The time lag usually affects the keying – in process as data entry will be stopped. It would not have been necessary waiting for the consultants if staff had the competence especially on the software used.
6. **Staff Attitude towards automation:** Many staff shy away from electronic systems with the fear of damaging or deleting important information while keying-in, this slows down the automation processing. University of Lagos Library management had addressed the problem by putting a PC on every librarian's table and embarked on training them on the use of it.
7. **Inadequate Training:** Staff are trained, however, the training is inadequate as staff need to always acquire more skills especially on the use of software currently used in the Library. There should be continuous training and retraining.

RECOMMENDATIONS

University of Lagos has taken steps towards automating the technical areas and has set up the On-line Public Access Catalogue (OPAC). However, libraries using the present software should share their experiences with colleagues.

The following recommendations are made for GLAS users.

- (a) Nigerian University Libraries should form themselves into consortia like it is done in Kenya, South Africa and Tanzania, and purchase a common integrated library software package. This will be beneficial as it would reduce cost of acquiring the software and resources could be shared among cooperative libraries.
- (b) Universities with similar areas of specialization should be networked. This will enhance access o academic libraries for research.
- (c) Vendors should be scrutinized before selection and should be made to sign an agreement on the regular servicing and maintenance of the software purchased from them.
- (d) Choice of the library software must be carefully considered with emphasis on the ability to meet particular library needs.
- (e) There is the need for training and retraining of librarians in the use of information technology. Information literacy is also essential for all librarians who will be living and working in the 21st century.

CONCLUSION

Automation of University of Lagos library is still in its embryonic stage. Entries in the TINLIB cataloguing database and GLAS cataloguing database are being set up for

OPAC. Considerable thought has been given to reconversion of the existing holding in card catalogue records to machine-readable format.

Staff training is another critical issue that the management has taken cognizance of commendable effort was recorded recently when library staff were sent to staff computer training centre to acquire skills in the use of computer and its application. But there is the needs for continuous training of staff to enable them educate users through various user-education programmes. Without staff support and training no system can offer its full potentials.

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