

Management of Information Resources through Integrated Emergent Technologies in Nigerian Libraries

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Abstract

The world has evolved and still evolving in all spheres of human existence. Digital technology is one of the world's fastest evolutionary industries that have gainfully improved tasks and activities. Digital technology has revolutionised basic life's activities such as buying and selling, communication, law enforcement, feeding and professional task in all fields of engagement. Libraries are not left out of the technological evolution. However, the realities of emergent technologies through electronic devices and equipment, proliferation of applications and software has placed libraries, librarians, information centers and organizations in Nigeria on their toes in challenging the traditional library practices and services to integrated technology application need of providing fast and effective resources.

Introduction

The world has evolved and still evolving in all spheres of human existence. Digital technology is one of the world's fastest evolutionary organisms that have improved tasks and activities. Digital technology has revolutionized basic life's activities such as buying and selling, communication, law enforcement, feeding and professional task in all fields of engagement. Libraries are not left out of the technological evolution. However, the realities of emergent technologies, electronic devices and equipment, proliferation of applications and software has placed libraries, librarians, information centers and organizations in Nigeria on their toes in challenging the dire need of providing fast and effective resources.

Libraries are established for information preservation and at the same time, retain, and preserve their print resources for generations to come because libraries are some of the essential agents for fostering human capital and social development. Fostering social development amongst

Keywords

Technology; Libraries; Library services; Library management; Information management

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members of the society especially in academic libraries can be promoted through provision and management of information materials and resources in various disciplines of human existence. These materials could be print and non-print materials such as books, serials, periodicals, artifacts, cartographic, audio and visual materials (Aguolu and Aguolu, 2002).

These materials are procured by libraries as a result of a need to satisfy the information interests of their patrons. They are being acquired, collated, organised, preserved and disseminated through various procedures, routines, and activities which are manually dependent especially for older libraries. According to Marchionini and Maurer (1995), a library is fundamentally an organized set of resources, which include human services as well as the entire spectrum of media (e.g., text, video, hypermedia). Libraries have physical components such as space, equipment and storage media; intellectual components such as collection policies that determine what materials will be included and organizational schemes that determine

how the collection is accessed; and people who manage the physical and intellectual components and interact with users to solve information problems. Digital technology software such as TINLIB, INMAGIC, KOHA etc. are some of the digital technology software meant to address service deliveries in libraries. It is evident that most libraries in Nigeria, especially some of the age-long established libraries are still struggling in adapting completely the use of technology in providing key services such as cataloging and classification, reader's services activities. These services are manually operated and hence, expose library staff to frequent errors, omissions and inaccuracies in offering satisfactory services to their clientele. These age-long libraries are likely to boast of large volumes of print and other non-electronic resources such as books, serials, periodicals, artifacts, cartographic, audio and visual materials which could pose a tasking challenge in beating the electronic revolution in Nigerian libraries. The last two decades have experienced a surge in technological advancements which has transformed the library and hitherto, her services. The innovation in library services has in its package an offshoot of technological inclusiveness in most library units, tasks and activities.

Overview of technology integration of services in Nigerian libraries

Beginning from staff management; collections development and acquisitions; cataloguing and classification; reference services; reader's services (circulation); among other, for efficient and more effective and inclusive service delivery. Most Nigerian libraries are partially compliant in the use of technology in managing routine task and activities and even relating with clientele. According to Das (2008) the technical services section of the library is one section which will benefit thoroughly from integrated digital technologies in libraries especially with the use of the Machine

Readable 5 Catalogue of the 21st century (MARC 21) in cataloguing and classification. It is imperative that libraries and library professional rise up to the challenges and dynamism in integrating digital technology for routine activities in the library. Jan and Sheikh (2014) also assert that librarians in the 21st century should be encouraged to develop requisite technological skills in matching up with emerging technologies.

In Nigerian educational sector especially libraries, financial paucity in meeting up with basic official tasks are not strange phenomenon bedeviling the information institution especially as libraries are low in profit generation compared to other arms of the educational institutions. The severity of this condition however can be felt from the incessant strike actions by the university lecturers under auspices of the Academic Staff Union of Universities (ASUU) insisting on a basic bench mark for government to fund the all sectors of universities including libraries and science laboratories. Kenekwue (2020) reported ASUU's response to the Nigerian Federal Government's instruction for tertiary institutions to adopt the use of E-learning platforms during the lockdown as a result of the COVID 19 pandemic; the union through their University of Ibadan branch blamed poorly equipped libraries, poor E-library services and non-subscription to online materials and a total blackout on library services due to power shortage, internet connectivity inadequacies, lack of effective library systems with seamless access to global online resources as inhibitors to the E-learning directive by the federal government (Kenekwue, 2020). Therefore, shrinking finances, lean staff and skyrocketing cost of print information resources are factors which are meant to propel library management in developing affordable and sustainable library management software for effective library services (Eze, Eze and Bello, 2018). In libraries, print resources are cardinal point where all the strengths and peculiarities in

libraries are evident. Integrating digital technology in carrying out routine task and activities does not jettison the place of print resources rather it should be used symbiotically to create harmony in the discharge of services. Digital technology has made quintessential duties and activities much easier and faster.

Most activities in almost all spheres of our current existence have become technologically manipulated. In libraries however, accessing, retrieving, recording and managing of information materials have become even more challenging, cumbersome, and time consuming. These challenges are inevitable for some whose collections and routine systems are still being manually or partially technologically operated. But with the presence of digital technology, libraries both new and older ones can maneuver these challenges and as well as evolve better and smarter approaches to information management and services. IFLA (2018) stressed that „Equal access to the cultural and scientific heritage of mankind is every person’s right and helps promote learning and understanding of the richness and diversity of the world, not only for the present generation, 6 but also for the generations to come“.

The benefits of integrating digital technologies in libraries far outweigh the cost of not having it done at all. Integrating digital technology in library routines would boost confidence of staff and users in the library and improve the security of both print and user facilities in the library. Technologies like the Radio Frequency Identification (RFID) machine, barcodes etc. in some Nigerian libraries through use of electronic media in disseminating relevant educational and social information links to their clientele and members of the public has promoted better attitude towards library use amongst clientele and also boost the confidence and morale of library staff towards service delivery. Khana (2014) corroborated the

stance that students feel comfortable and excited while using modern library technologies especially with the use of Radio Frequency Identification system (RFID), a modern library technology which functions with chips and barcodes inserted in books and identification materials. Fadiya, Odeh and Sopuru (2015) describes RFID as a technology which alerts library staff of any incident of fraud either of books or library user through the aid of radio frequency identification. Accessibility to information resources and materials are key responsibilities of libraries. Similarly, Edwards and Orukpe (2014) buttressed the efficiencies of RFID in aiding library services; they assert that RFID technology is able to track book information in the library and the number of people that access the library. The device consists majorly of a RFID reader, a Bluetooth module, a microcontroller and the materials to be tracked are tagged with a RFID (a transponder). The unique IDs are stored in a PC running an application with other information on the materials into a database.

Through these processes, books, library users with their information as well as their tag ID can easily be used for cataloging and user authentication. The device is designed to be mobile so that mixed books on shelves can easily be sorted out as the RFID reader moves across them. A model of the system was built, tested with several data and the result showed satisfactory improvement in the efficiency of the library management system. However, accessing, retrieving and managing resources and materials in libraries, especially in libraries whose establishment have spanned decades from the 1960’s to the present day 21st century has become a source of concern and challenge to Librarians and library administrators. The purpose of a technologically driven library operations is to provide orderliness in resource organisation for easy access and also to sustain library relevance to her teeming users.

A digital library is an integrated set of services for capturing, cataloguing, storing, searching, protecting, and retrieving information.

- Digital library services bring order where data floods and information mismanagement have caused much critical information to be incoherent, unavailable, or lost.
- Digital library architecture emphasizes organization, acquisition, preservation, and utilization of information.
- Digital library systems are realizations of architecture in a specific hardware, networking, and software situation.

Library unit and services that most requires integrated technology management

There are 3 important units in a library that demands the attention of integrating technologies in order to provide more efficient and effective services to patrons. These units and the services it offers without technological integration can be very tasking, time consuming, cumbersome and boring for both library staff and patrons. These under listed units do not represent the whole unit in a library or makes other units not listed here less tasking or irrelevant to technological integration. These units are:

- Cataloguing and classification
- Collection development and acquisition
- Circulation

Cataloguing and Classification

Cataloguing and classification is the soul of every library. Classifying books based on their appropriate subjects is what defines orderliness in any library. However, this activity can be very tasking, physically, mentally and time consuming especially as it requires the use of multiple tools such as the Subject Headings, AACR2 (Anglo American Cataloguing Rules), thesaurus, dictionaries and cataloguing schemes. With the use of technology however, these activities can be

easier and less time consuming. This can be achieved through the use of web connectivity to launch into online catalog databases of most schemes such as the LC, DDC, UDC, MARC21 online catalogs where most collections have been pre-catalogued and subjects as well as author cuttered. Use of online catalogs to copy catalog resources is quite easier and saves time for the cataloguing and classification unit. Similarly, if the library has a ready library management system where all books catalogued are keyed, online search and cataloguing makes filling database interfaces much easier. Equipment needed for enabling electronic cataloguing are: fast internet connectivity, computer and the right human resource personnel.

Collection Development/Acquisition

Collection development and acquisition is that unit of a library that is charged with responsibilities of acquiring resources for the library. The unit is also responsible for assigning accession numbers to procured resources and determining the appropriate location (stack room, reference, reserve, short-term loans) resources are to be shelved. Oghenovo and Iwighrehweta (2012) succinctly put that the primary role of acquisition has traditionally been to serve the library rather than individual readers; as long as the library's collection is being built efficiently, the library as an organisation becomes satisfied. However, these activities can be more effective with the aid of technology. The fascination of automation in the collection development unit includes inclusion of order record in the library acquisition register and direct loading of new titles announcement; as potential order records gives library users enhanced access to available study materials. With automation of collection development unit, accession list and numbers can easily be produced through electronic generation and users can easily be notified of new titles and approval as they appear, by using file

transfer protocol, loading of approval and exchange data on local systems can be processed in minutes.

Through the use of internet connectivity, various publishers could be reached. These publishers share their catalogs with librarians through mails of which the librarians dispatch these online catalogs to the various departments for selection and compilation of selected materials. This list is then being compiled and returned to the publishers with the purchasing order forms already filled for purchase. According to Ifidon (2006), there are three main steps - ordering, receiving and invoicing. The system then will allow the acquisition process to run, using its reporting system and order transmission. These steps with automation ensure accuracy and speed as well as efficiency in service delivery.

Circulation Unit

The circulation unit is that arm of the library which deals with patrons. The circulation unit meets with the information needs of the patrons either through reference services or in-use of resources. The circulation unit ensures orderliness, regulates and supervises the maintenance of library rules and regulations by patrons. Also, the unit is responsible for providing patrons with relevant resources and information through book loans, serials and other library resources. Integrating technology in this unit will ensure that the following services are efficient:

- Providing electronic file record for each patron with important biodata details
- By easily electronically programming the maximum number of books to be loaned
- By revealing identities of patrons through the upload of passport photo on the database
- It enables the circulation librarian to have knowledge of the total number of registered patrons from a particular

department or the institution in general

- It provides summary of resources available for loans for a particular field or all the resources in the library.
- It makes it easier to reach out to patrons via email or mobile contact
- It provides accurate status of patrons in the institutions (whether active or inactive, registered or unregistered with the library)
- It enables librarians and patrons have idea about the availability of a material and how to trace loan records.

Technological equipment and facilities that supports management of library services

Speedy internet connectivity: a speedy internet connectivity buffers connectivity through the web. This can be enhanced by installing a router which has cable or wireless enablement to function:

Computer programmer: it is the computer programmer that designs, creates and programmes the library information emanating from the services offered by each library unit. This information is designed and created with the aid of software which enables the information created in form of tables, windows and interfaces to run and obey commands electronically.

Network specialist: a networker is a person who interconnects two or more computers and other devices to achieve exact communication and response from all the connected devices. A networker sets or arranges the devices based on topologies most suitable to a particular library. It is the networker that determines what type of device to use as a Server. It is also the networker that prescribes the required disk or RAMs size of devices needed. The networker is usually responsible for troubleshooting or search for network signals should the network become poor or should the database become faulty.

Computers (Desktop, laptop, tablet, smart phones): These are equipment and devices that enables web connectivity, information searching, typing, records keeping and management etc.

Scanners (barcode or document scanners): scanners provide a photographic copy of written or photographic documents which are usually used for reference purposes. (E.g.: passport photograph of a patron).

Laminators: laminators are film heating machines that heat up plastic bags placed over a document for the purposes of preserving the inscription quality on the document from wears and tears in the future (E.g. laminating student's library cards).

Photocopiers: Photocopiers are reprographic machines that reproduce copies of documents for use.

Binding machine: A binding machine is equipment that preserves wears and tears from taking toll on books. Binding promotes the physical security and strengths of a book by repairing damaged book covers and replacing it with a better cover. Binding provides and ensures sequence and orderliness of carelessly handled resources.

Hard-disk, Hard-drive, Flash-drive: these are external data saving devices that aids in preserving information and they are also very flexible for use. These devices aid transfer and access of information from one device to another. The capacity of these devices usually is enabled to accommodate very huge files that can preserve, sustain and retain very important information. Most importantly, these devices are used for backup of database files.

Adequate number of personnel (depending on the size of resources to be integrated): The belief that technology has come to replace human workforce if integrated in library management activities is unrealistic. Without human resources, technology will have no value or place. It is the human workforce that promotes and beautifies

technology through integrating its services to hitherto manual activities. In the library system, human resources are required to man and operate machines by feeding the computers with the relevant information.

Activities such as scanning, photocopying, typing, binding, laminating etc. are all technological oriented activities, but none of these activities can independently operate itself without the input of human input. It is evident that the world is rapidly going post-human and trans-human technology wise. But in Nigeria today, libraries are yet to assume such level of operations because as it is today, most libraries are yet to be fully technologically compliant and integrated-some Nigerian libraries are yet to grapple with the mystery of technology and innovations. However, for technology integration in library management in our today's Nigeria without the human resource workforce being at the frontline, would be difficult if not impossible.

Merits of technology integration of library services

Assures efficiency

Promotes accuracy

Saves time and space

Assures reliability

Promotes accountability

Provides clarity

Reveals loopholes and weakness in the collection

Promotes security of resources

Promotes confidence in staff and patrons

Demerits of technological integration of library services

It is capital intensive

Dependent on human resource personnel

Heavily dependent on trainings and retraining of staff and patrons

Heavily dependent on electricity (for countries with poor power generation)

Requires high level of attention (in the care and security of information keyed in)

Requires constant updating and upgrading of information

Requires constant services of technicians (programmers, networkers and hardware engineers)

Problem of technological inclusiveness in Nigerian Libraries

In the past, libraries in not only Nigeria but also Africa as a whole were the guardians and distributors of “books, journals, maps and other materials that are used by students and teachers in the learning process” (Pavani, 2016). But today, library administrators, patrons and the society are concerned about the diminishing role of libraries to their information needs and this role increasingly points at in-exhaustive technology adaptation in libraries.

Researchers such as Kenechukwu (2020), ASUU (2020), Eze, Eze and Bello (2018), Edwards and Orukpe (2014), Fadiya, Odeh and Sopuru (2015) and a host of others recommended that there is a need for propagation awareness of technological data management within institutions with academic and research libraries taking a leading role in personnel trainings and technical support needed for recording and retrieving information materials. Chiware and Becker (2018) in their research distributed a questionnaire to fifty-nine university librarians and library directors in university and research libraries in eight southern Africa countries in Botswana, Lesotho, Malawi, Namibia, South Africa, Swaziland, Zambia, and Zimbabwe.

The results show that research data management services are still in their early stages of development with various countries and institutions at different levels of readiness for service provision and with

some countries and institutions not yet ready to implement any type of services. A small number of institutions have policies in place or are planning to implement some in the near future. Existing institutional repositories are also seen as a possible extension of data management services in such a way that these institutional materials or documents can be scanned and digitized in order to build an institutional database.

Technology has come to stay, and has taken the lead in servicing old and traditional information institutions including libraries. The response of libraries in Nigeria and Africa as a whole to the current challenge has been to establish virtual links and consortiums with developed libraries in Europe and America or procure and adapt to commercialized databases for managing their resources. According to Hermosa and Anday (2008), Libraries support learning by offering carefully selected information resources and a variety of ICT supported services to facilitate access to their holdings which include learning material as well. These services include: online bibliographic instructions, computerized library catalogs, digital libraries, distance learning services, e-databases and instant messaging services, inter library loan and document services, ready references, virtual classrooms, virtual references, etc. (LI, 2006).

Attempts towards technology inclusiveness in Nigeria Obviously in some academic libraries attempts have been made by some library administrators towards beating the technological trends in resource management and service delivery. For example, the collaboration with the Mc Arthur Foundation to fund and establish a library consortium using the Machine-Readable Catalogues of the 21st Century (MARC 21) by the Kenneth Dike Library University of Ibadan. Similarly, some other academic libraries in Nigeria has also made unsuccessful attempt to adapt the use of some commercial library management

software and databases such as INMAGIC, TINLIB, KOHA ILS, L4U, OPALS, DESTINY LIBRARY MANAGER, HANDY LIBRARYMANAGER, INSIGNIA LIBRARY SYSTEM, ACCESS-IT LIBRARY, MODERNLIB, ATRIUM, LIBRARIAN, READERWARE (Capterra, 2017), to mention but a few. The proliferation of the commercial software in Nigeria is yet to achieve a fully technological conformed library in academic university libraries. There is a likelihood that reasons behind full technological conformity in operations and services of most academic libraries may not be unconnected to some perennial issue of finance, managerial apathy, poor technological knowhow, staffing amongst other issues bedeviling academic libraries (Kenechukwu, 2020; ASUU, 2020; Eze, Eze and Bello, 2018; Edwards and Orukpe, 2014; Fadiya, Odeh and Sopuru, 2015). It may be right to posit that the state and level of technological conformity in academic libraries is an African problem, which requires an African approach. In order to attain an Eldorado in service delivery and meeting world best standard practices library managers must devise a means to cut corners from technological impediments by they themselves designing and developing a unique library management schema peculiar to their services and operations. One sure way to begin technological revolutions in academic libraries is by building library technological architectures which would be based on the libraries local operations, activities and routines uniquely harmonized and specifically built to run on a particular library system.

However, it is evident that technology has come to jettison and replace manual operations in libraries, as this assertion may be assumed by many to be correct, however, manual operations in libraries cannot be jettisoned. The beauty of infusing technology in library operations becomes more dependable, reliable and smart when operations and activities are being synchronized alongside the manual

approach. The objectives of most libraries could be similar, but no two libraries can be exactly same in all functions and services. To this end, for an efficient service delivery in the use of technology in the management of library resources, every library is supposed to establish an 'Authority Control'. By Authority control, libraries can effectively manage her resources technologically based on its peculiar approach in running her affairs. Therefore, it becomes crucial for every library management to adopt a more inclusive approach in determining the right kind of library management software in achieving a technological balanced library service delivery system.

Factors to consider when designing a self-schema or template for library management system

Personal view as a library manager suggest that there are key factors to put into consideration when designing or setting up your template, framework or architecture for a library management system.

1. Identify what areas your library is constrained in service delivery
2. Your library's goals and objectives (Mission and vision statement)
3. What aspects of your units/ sections needs technological attention more (scale of preference)
4. Design a diagram of sequence, procedure and channels of activities in your library section by section
4. Identify and access resources availability needed to achieve
5. Identify, access and contact a programmer
6. Educate, instruct and enlighten your programmer on how you want the system to run
7. Evaluate the pros and cons of establishing the technology
8. Involve the institutional managers of your interest
9. Convince and defend your proposal for technology infusion

10. Get managerial approval
11. Set the templates into programs
12. Achieve your technological infused library.

How to work around the 15 rules before designing a template

Identify what your challenges are: every library is unique in its operations and as such would also require unique solutions to her problems. For instance, some libraries could have a big challenge retrieving materials on the shelves, while some may not have defined method of charging and discharging books, thereby keeping track of information resources and materials in the library would be difficult. Some libraries could be unable to track or rate the extent on patronage to their library, or even have the identities of their users known. This is where the need use of technology and database creation to solve some of these problems comes into play. And in designing or instructing the designer on how the template should run, curbing these major challenges should be key.

Your library's goals and objectives (mission statement): a clear definition of your objectives will guide you in drawing out a template for your library. You need to set out a clear mission statement which could span years before achieving. This implies whether your collections are bibliographically electronised (having bibliographic details of all your collections typed out) But then, if that is not in place, then a need to technologically set the machinery in place to achieve your goals should take effect- by making available equipment's such as computers, alternative electrical power source, information preservation devices such as flash drives, hard disk, hard drive, etc. most of all adequate and capable human resource personnel and funds at the long run. All these aforementioned is a necessity if as a library administrator you desire your library to be placed ahead of other libraries in terms of efficient service delivery which could consequently necessitate inter-library

cooperation in building and managing consortium, hence the need to place your services on a technological driven practice.

What aspects of your units/ sections needs technological attention more (scale of preference): Identification of core units and aspects in need of technological aid is very crucial. It is important to place all sections and services on a scale in order to weigh the 12 aspects that need more attention. For instance; charging out books could be a challenge, or cataloguing and classifying books could be most cumbersome. The right thing to do is to channel more designs and instructions to those areas such as adding hyperlinks for any classification schemes you wish to adopt, for easier classification and also classifying materials for easy retrieval and discharge.

Design a diagram of sequence, procedure and channels of activities in your library section by section

After making your decisions on how you want your library to operate. Designing an organogram of activities and procedures are very important. This will enable the programmer to have an insight of what task and unit comes first designing an organogram of activities brings about orderliness and consistency in operations. It provides a guide to your library operations in such a way that work flow goes seamlessly with or without an administrator. Below is a step by step sample of how an interface of a library management database should appear: Example, for Collections Development Unit an interface can be designed in such a way that it contains the following fields:

Collection dev. / acquisition unit

- Name of vendor:
- Address of vendor:
- Update of vendors:
- Title of book supplied/no. of copies:
- Author:
- Publisher:
- Date of publication:

- Date of acquired books:
- Accession number:
- Location (reference/stack/ reserve) :
- Update of ref. materials; reserve; stack:
- Move to the cataloguing unit:

All these steps with the aid of technology and database can be made easier.

Identify and evaluate access to required resources:

There are factors to consider in achieving your technological goals. First it is important to identify what is needed. First of all, the library budget must be put into consideration. Can the allocated budget accommodate the cost? Equipment like computers and the required number, personnel with requisite tech-know-how (their number will depend on the enormity of tasks you expect), Power availability and sustainability; internet services availability.

Identify access and contact a programmer: in choosing a programmer, proximity is more important than the cost of recruiting such programmer. This is because, in case of modifications and issues, the programmer would always be handy. It is important to also access the programmers' previous works in the aspects you want him to work on. The programmer's credibility and integrity also determines the seamless success of your database. Where the programmer is unreliable, your effort and dream could suffer.

Educate, instruct and enlighten your programmer on how you want the system to run

As the administrator, you alone understand better what you want from the database. It's the duty of the library administrator to instruct and guide the programmer while configuring your designs. For instance, you can decide that every field of entry like the "Add Book" button should have certain subfields which should disable the window the luxury to save an entry without a

particular item or clause. For instance, since every book is supposed to be unique in terms of identification number, you could choose that without an accession number or a unique book identification number keyed in, the entries for a "New Book" shouldn't save. There could also be the choice of disabling the circulation unit window for "Add New User" when the users' identification number is not entered.

Evaluate the prospects and constraints of establishing the technology. It is important to evaluate the sustainability of the proposed database. Is it going to be sustainable? How will the pros of this programme elevate us while in use? How does it alleviate our most difficult task? This can be done by running it on your personal PC first, in order to make a trial version to see how workable, flexible for change and sustainability the system would be if implemented. Troubleshooting the trial version is enable you observe some issues that can be encountered during use and how to forestall or solve the issues. As an administrator, you are supposed to be a master in the use of the programme because this mastery will enable you instruct, educate and carry other staff along while it's in use in your establishment.

Involve the institutional managers of your interest: since the library is part of an institution, it is very important to involve the parent body on your decision or choice to establish technological driven services.

Convince and defend the proposal for technology infusion

This can be done through presenting proposals for your intentions. The Onus is on you the administrator to defend your proposal. You must emphasize and explain reasons why such capital-intensive project should be approved, of what benefit the project will be to the institution if such huge funds are committed to it. As an administrator, you carry your employers along with detailed information about what

you intend to do. And this means you really have to be knowledgeable in that regard to be able to defend your intentions.

Get managerial approval: after defending your proposal with your employers.

Its either your proposal gets approved or rejected. Either way, your mastery and clear understanding of your intentions would be the major determinant factor. If it gets approved, you take your time to ensure all resources needed to execute the project is available.

Set the templates into programs:

The templates already designed should at this point be set into programs and motion. The speed of programmers varies and also depends on the enormity of task to be done, but regardless it is important to work on a stipulated time frame, this also will enable your employers applaud your competency and professionalism.

Achieve your technological infused library: when this task is completed, a new library method and approach is born. A new face of the library is and efficiency is seamless. It would be nice to have a mini launch of the database with the employers and all unit heads present, when unveiling the methods and workings of the library's database. It is also very doable and possible to link the database with the institution's information systems.

Recommendation

This chapter recommends that technological equipment should be an integral part of a library. Similarly, effective integration of technology in traditional library services should be the primary objective of any library administrator in the 21st century. Paucity of funds is a commonly a denominating factor for most Nigerian institutions especially libraries; this is likely because the library is perceived by institutional management to always receive or demand huge investments but slow in generating funds in return.

However, in achieving this goal, the library administrator has to be tactful and smart in changing the perception of the management towards the library by ensuring that other services such and programme are organized frequently by the library. These programmes can be organized with the librarian sourcing for external funds. This step could perhaps change perception of the management towards the library and thus, provide reasonable support for this venture. In getting this dream to reality, internally generated funds such as overdue fines, external service charge, facility usage, etc. if put to good use can get a step further. Also, organizing a Go Fund Me project from patrons and alumnus could also add up to achieving this goal. Similarly, reaching out to partners and prospective partners of the institution could also bring closer the dream of integrating

Conclusion

In conceiving these ideas, it will remain only ideas if it doesn't get into work. Beautiful ideas could sometimes take time to materialize especially when huge capital would be involved. But in the case of likely impossibilities of establishing this to reality due to certain constraints, as an information manager, your ability to be resourceful comes into play. You could source for fund through certain avenues.

It is good to know that a technological driven library in the 21st century would outsmart the ones who are not. A technological woven library services would place your library on a digital footprint of time while those who are not could go into extinct. Yes, it could take years especially for age long establish libraries to input the bibliographic details of all their resources on the database, but as they say slow and steady wins the race. With daily and weekly targets and with the aid of ad-hoc staff this can be realized in the shortest possible time.

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