Effective Planning Strategies: A Key Component for Implementation of Automation in Academic Libraries

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Abstract
Academic library, as a dynamic, vital organ in an organization or institution of higher learning, plays an important role in the academic programmes in selecting, organizing and disseminating of information to enrich the curriculum; it is deeply affected by the information technology revolution. Therefore, the need for effective planning strategies in meeting the demand of the present society in transforming the library into new information service centre becomes pertinent. The focus and aim of the paper is to provide steps to be adopted in the implementation of automated library services particularly in Nigeria. Strategies are the focus of all planning processes and it incorporates purpose, policies, programmes, actions, decisions, collaborations and resource allocation. The study also focused on automation activities as the core management preparation or analytical process of identifying of objectives, effectiveness/ineffectiveness in the context of implementation. The study recommended among others in its conclusion, that librarians or information managers should see the steps, factors and the planning process as provided in the study as a way to eliminate wastage of resources, other sources of funding of the project have also been proffered.
Keyword: Automation, Planning, Strategies, Library, and Components.

1.   Introduction.

The Academic Library planning strategy generally follows the same pattern as other organizations. However, academic library services are carried out with diversified specialization through effective planning strategy to meet the curriculum and diversified academic needs of the institution. The current state of information explosiont has placed the need for or a desire for effective management of the flow and uses of information in the society. The developed countries have achieved this some years ago and therefore have a greater edge over the developing countries whose track of developing library automation is hindered by some factors such as poor planning strategy, human factors, level of infrastructural development, fear of loss of jobs among library managers, and economic factors among others.

Planning is concerned with developing a hierarchy of plans which can be translated into action. It involves defining an organizational objectives and setting out ways or routes to meet these objectives. Planning also makes it possible to evaluate and controls performance standards. Koontz and O'Donnell described planning as "an intellectual demanding process". They further said that it required the conscious determination of courses of actions and the basing of decision on purpose knowledge and considered estimate. These words play an active part in the automation or computerization of the library. We are now in the economic, technological, social and political age in which planning like the other functions of the librarian has become requisite for the library survival. Change and technological advancement enhances development and growth in one hand and challenges in the other hand particularly for the developing countries where technical knowhow for the management of these are still inadequate. Librarians in the developing countries have discovered that without strategic planning as a key component both for developing and management, the services of their libraries will come to a halt because of misfit part or the absence of the needed components in the library services and operations.

2. Importance of Planning.

Planning is particularly, very important for libraries in the developing countries like Nigeria where resources are relatively scarce, planning to avoid waste of money and other resources become very compelling as the automation in the library requires huge amount of money, expertise and material resources. The importance of planning is well recognized by the Nigerian government that it engages in National Development Plans (NDP). Planning is the blue print of action which when implemented accordingly culminates into a master piece. Any librarian in Nigeria or anywhere in the world who wants to embark on automation of his library has to engage in detailed planning as the first step in order to identify the felt need or the reason for automaton, then, the users, equipments, skilled and unskilled manpower as well as the capital or sources of fund. Many academic libraries had started automation but failed at the end of it because of inadequate planning strategies; due largely, inability to identify all the important variables likely to bear on the project, for success of the library objectives.

Many libraries in the past were preoccupied with traditional or manual day to day operation; they have no time set aside to reflect on the future, of their library in terms of meeting the user's needs. Meanwhile some librarians have developed a narrow concept of library management and therefore considered it meaningless to plan for fear of the variables and the outcome. To these set of librarians, there is no set goal(s) or foreseen future challenges planning therefore is not necessary. The present growth in knowledge and technological advancement demands that every librarian to engage in strategic planning both in the short and long run to keep abreast with the emerging trend in library operation. Failure to plan gives rise to ineffectiveness, undirected actions and waste of resources. Effective planning strategies will enhance the formulation of policies and help the Librarian in the management of its resources, personnel, and the best way to utilize them. Automation in the library situation bases mostly on the personnel which is one of the most expensive items of cost. Therefore effective planning is a concept strategy of management and precondition for better results as far as automation is to be achieved in the academic libraries.

Strategy is the focus of all planning processes, and it usually incorporates purpose, policies, programmes, actions, decisions and resources allocation that serve to define any organization. Any dynamic organization like the library has no choice but to anticipate the future through capacity building, to attempt to mould the future directions and to balance short range and long range goals. Preparing for library automation is the core management activities or an analytical process of identifying effectiveness or ineffectiveness in the context of the programme. By selecting appropriate agenda from among those alternative and pursuing a detailed cause of action.

3. Planning Process in Automation:

Planning process in automation is a stage in planning towards improving library services. The first stage is to examine more precisely the framework within which the current system operates. A successful planning process in automation is dynamic; therefore, it cannot be done or carried out in isolation of any part of the library or institution. To create a planning attitude, the concept must involve every level in the organization beginning from the top management personnel and filtering down throughout the various levels to be affected, and implementation through policies, procedures, projects and programmes that are developed as a result, example of such are in term of cataloguing services, reference services, circulation service, internet services etc. The process must focus on all the part of the entire library services. Therefore, the idea of involving every single person in the process is an idealistic approach. Robert and Barbara (2007) stressed that "it is imperative that each person involved knows clearly the purpose of planning, the expected outcomes and his or her role as well as that of every individual throughout the process" after reviewing various literatures on planning process, (Olsgaard, 1989) Concluded that, "the extent, to which operands' accept technological change, and indeed, welcome it, is largely determined by their involvement in the planning and implementation of the change". Keeping the entire library staff informed about the plan process and are involved in the Implementation, is a key component in the actualization of the library automation. The following stages form the steps in planning library automation process;

- Library objectives
- Identification of services
- Selection of course of action
- Formation of specific target
- Implementation
- Feedback

In addition to above steps expertise, these steps are basic for planning an automation process in the academic library.

4. Factors in Planning Automation

Stueart and Moran (2007) proffer the following factors in the planning of library automation, they are;

- Time frame
- Collection and analyzing the data
- Flexibility
- Accountability
- Environmental assessment
- Standard and guideline.

On the above list, Stueart and Moran noted that there is need to stress on environment assessment that is economic, social, political and technological influence in achieving the mission of a library or information centre in today's volatile climate. Also, (Casey and Savastinuk, 2007), observed that Technology and globalizing

international resource needs, are increasing and the world political climate is changing daily as government and organization reacts to change. Robert and Barbara (2007) examined economical factors, including publisher price increase, foreign exchange rate, varying tax revenue from funding authorities, increasing cost of electronic resources, inflation and global, intellectual property issues which affect buying power.

5. Library Automation.

Information and Communication Technology (ICT) has become an important field for all information professionals. The major reason is, its relevance and application to tasks in the library and information centre. Literatures revealed that many libraries and information centers in the developing countries are trying their best to computerize their services. The first successful effort in Nigeria is that of International Institute of Tropical Agriculture (IITA). The library computerized its services in 1984, as reported by (Lawani, 1992). The services or its records were accessed within and outside the library by their clients and staff. A study by Adeniran (1997) showed that about 72% of the 161 libraries surveyed in South Africa were computerized as at 1994. Ogunloye (1997) reported that attempts made by some of the universities in Nigeria to automate their libraries failed. Historically, library automation is more than 70 years now, but it is yet to create significant impact in the academic and research libraries in Nigeria irrespective of its relevance to library services. Automation in the library implies the process of the use of computer in carrying out library operation and services. It is the technology that enables the library to process, store, retrieve and communicate information in electronic format and it is unrestricted by distance, time and space. Lawal and Oni (2007) said that "the productive or benefit of library computerization range from improved quality to task services and resources sharing among others". These revealed that the procedures in cataloguing and classification, which causes the delay, are reduced and a great premium will be placed on the users need in the library. Fernandes (2001) also emphasized on some of the functions of the computers that makes it useful in handling man's activities. He declared that "the rapidly advent of information technology is highly powerful novel, widespread and influential -----." In an academic library where patrons need precision, speed versatility in making their bibliographic searching, automation of library becomes indispensable as to encourage effective use of the library resources. The users will be connected within and outside the library in less time.

6. Automation of Library Activities.

Automation of library activities is not a sudden decision to be taken by a library or information centre whether small or complex. One of the major reasons for effective planning is the cost involvement in terms of equipments, cost of software subscription, staff and user training. Having discovered the need to automate, a system analyst will then analyze the existing system and design the appropriate computerization system for the library. According to Rowley (1980), there are six (6) main steps in automation system analysis. These are; definition of objectives, feasibility study, definition phase, design phase, implementation phase and evaluation phase. The problems and challenges the library is experiencing must be ascertained and how automation would eradicate them as well and what the library hopes to achieve by computerizing its services must be stated. The answers to such questions will constitute the objectives of the automation exercises which make the services of the library more effective and efficient.

Farajpahlou (2002) also provided criteria for success in automating library, he grouped the steps under three sub-scales: management of the system, usage of the system, and boundary issues. He emphasized that successful automated library system is usually based on a well prepared automated plan. Library automation has many advantages, in that, it reduces the number of repetitive routine tasks, it generates library statistics easily, and more importantly, it speeds up library services, and is more efficient than traditional or manual library services. The system should allow increase of quality of library services without increase of staff and that the system should be user friendly in terms of interactive interface, self instructive, that is, it will have tools like help tutorials etc.

According to Kimber (1974), effective planning is required for automation if the new system is to run smoothly, if the library professionals and clerical library staff are to continue to enjoy a high degree of job satisfaction, and if the library public is to benefit from the automation system to the fullest extent. Kimber advanced in his discussion on planning by suggesting that the part time or non permanent staff should be permanent during the stages of the activities, like designing, programming, installing of the computer base system, test-running of the system etc. This is to make sure that everyone who works in the library either full or part time at whatever level of management should know how the entire system operates. No system is static, but every system is constantly adapting to the changing needs of those whom it serves and to the changing environment. Automating the library means the application of new technology to a field of professional activity; it therefore requires professional skills and ability. It is therefore necessary to include the team experts who are professional in automation and in the field of librarianship. These sets of experts will lead and cooperate with other staff in the library throughout the entire process from beginning to the final stage as directed by the

librarian in order to achieve the desired objectives.

Casey and Savastinuk (2007) used three distinct vertical teams with distinct roles as change models in the library through automation process. They are:

- The Investigating team, they are in charge of brainstorming and development of new ideas or concept, investigating current services, needs assessment or discovering the flaws in the current system that desires change and make suggestions. They may commission surveys both internal and or external, to measure demand or desire for a particular service. The team may also visit other libraries or consult other organizations that have implemented the services similar to the idea or concept being investigated.
- The Planning team, this team is actually charged with determining the feasibility of implementing the desired system and creating a review plan. It is also responsible for three fold strategies or tasks prior to implementation and these are:-

    -determine and establish the feasibility of implementing the service, it seeks for more data in

    terms of implementation, overhead cost, staff and recurrent or maintenance cost

    -create a detailed plan for implementation; time table, training and retraining needs, etc.

    -design a review plan. The planning team defines the review criteria such as statistics, user and staff feedback and survey. The team will also create and evaluate schedules for review team.
- The Review team. The review team or R-Team is to crosschecks various plans or proposals designed by various teams in the process. They turn around every proposal till it is satisfied to be relevant to the desired objectives. They are responsible for all service reviews in the automated system.

7. Literature Review.

The computer at present is the greatest gift technology has given to the library for overall operations of the library services. Its capabilities are enormous. Chiemeke (2004) also stated that "computers have had tremendous impact on our society, in the manipulation of data, where complex tasks must be managed or where there is need for real-time access to centralized information from arbitrary locations." It is certain that in this age of information explosion, no library can effectively satisfy the clients' demands without automation, especially the academic libraries. It is on this note that the Nigerian Universities Commission (NUC) in its effort towards better library services directed all federal universities to automate their libraries, as an incentive, it went further to provide the basic hardware equipments and software programmes in the beginning. In fact, many universities started automation, a close look however revealed that the programme did not yield the desired result as most of the universities are not yet fully automated while some cannot be said to have done better.

According to Adams (1986), computer application in the library services first emanated from the United States of America in 1950. By 1960, computerization of libraries had gone very far, especially when mainframe computer in large organizations were used to facilitate database development, management and information retrieval. Historically, library automation is dated back to the 1940s and had affected positively library services especially in the developed countries and some developing countries of the world. It is sad to note that, it is yet to have any significant impact in Nigerian libraries especially the academic, public and the special libraries. Lawal and Abi (2007) says that "the productive or the benefit of library computerization ranges from improved quality to task services and resource sharing among others." The above objective can be achieved if there are effective planning strategies in the implementation of the library computerization. Modern Information Communication Technology (ICT) places a great premium on users needs in the library. Effective accessibility, utilization and efficient service delivery is what UNESCO termed "gateway to the knowledge". Awake (2005) said that "computerization of library has provided the unprecedented access to mankind's storehouse of knowledge as never before; the quality of information available to the public is exploding. Singh (2002) also said that "library act as a link between knowledge sources and users." In line with this statement, Anaeme (2004) gave the following advantages of library automation as "provision of up-to-date and readily available information and services to users, provision of effective inventory system and reduction of time and effort required to obtain information among others". Automation will afford the libraries the opportunity of access to national library information network as well as local networks. The reason is that participation in the internet knows no boundaries both in geography and time. The above listed advantages are likely to elude any academic library that is yet to be automated.

8. Library Software

The library software is that programme that enables the computer to carry out instructions and also perform certain functions. There are various software that are used in the library to carry out certain library operations such as cataloguing, circulation, acquisition, serial services, library statistics, and many other library routines. However, we need to consider that the needs of libraries differ depending on their sizes, funding, expertise and functionalities of the library package. They are produced or written by experts who are specialist in information

communication technology (ICT), etc.

Manjunath (2006) has given the following criteria for the selection of software for library automation, and these criteria must be adhered to strictly to ensure success. They are:

8.1. Who has developed the software? Whether institution or company or an individual?

In such a case, first preference should be given for an institution and second preference should be given for software developed by a company. Software developed by an individual should be as far as possible avoided because there will be no continuity in the software.

8.2. How may times the software has been revised since its first launch?

8.3. How many parameters are available for each module?

8.4. Whether the software has the facility to import bibliographic data available in ISO 2709 format and at the same time export data in this format.

8.5. Whether the software is user friendly and menu driven to facilitate access?

8.6. Whether training and guidance will be provided after installation?

8.7. If it will be available to operate on major operating systems and in multi-user environment.

8.8. Whether it is web interface able and supports data security through password?

8.9. Whether it can be interfaced with email system of the campus network?

8.10. How many installations it has got in the country, since when and its major clients?

8.11. Whether it can offer OPAC and different rights to different logins?

8.12. Cost of the software has also to be taken into account and compared with different software available in the market. This is important because if particular software provides good facilities but if the cost is very high, and software provides the similar facilities with slightly less cost than the later will be preferred. Therefore, comparative study of the cost factor of different software should be done before installation.

Adeniran (1999) listed some examples of library software used in Africa, these include: inmagic, Caudra star, Stylis, and MICRO CDS/ISIS etc. Also Adedigba, (2003), Ojedokun and Lumande (2005) highlighted on INNOPAC, ALEPH, MINISIS, and TINLIB.

9. HARDWARE

. Reitz (2005), defined hardware as Mechanical, electrical, electronics, or other physical equipment and machinery associated with a computer system or necessary for the playback or projection of nonprint media. There are various brands by companies and organizations; therefore, the choice of hardware and the peripherals is something that should not be done in a hurry or levity. This is because of its importance in automation process; there should therefore be a harmony and synergy between the experts and the library management as to which hardware to acquire considering their strength, cost and compatibility with the software to be installed.

10. Challenges

Strategic and effective planning as a key component for library automation enhances library operation and transforms information service delivery to the modern phenomenon. There is no planning without constraints; librarians in Nigeria are faced with some of these constraints in their efforts to automate their libraries. Writing on the problem of implementing virtual library in University Libraries in Nigeria, Akpan, Dlawa and Matthew (2009) observed that the challenges in automation and implementing of virtual library in Nigeria can be human, technical skill, finance, poor electricity power supply and attitude of users. Ogbomo (2011) also identified the challenges associated with the use if ICT facilities to include the infrastructure related challenges. According to him, these would involve a deliberate effort by the policy makers and planners to consider the building etc. Abisoye (2010) pointed out that both librarians and other information users should possess the necessary skills in the operation of ICT facilities to accelerate easy access to information resources.

11. Conclusion and Recommendations.

Computers have been tasted and are approved to have solved important planning problems. Changes in organizational behavior of library and information centers are the result of recognition that today's knowledge-intense climate requires a different structure, attitude and outcome on the part of those libraries. In order to render effective services to its patrons, there is the need to ensure that academic libraries are automated, it requires collaboration and cooperation among all levels of workers and fund should be made available for library's collection, structural and manpower development.

Planning process is an important aspect of sustaining an academic library's viability. It requires examining the factors in the process, setting a proper environment within the academic library, and making decisions based upon sound guidelines. Once the process is in place, an organization or academic library can view the pictures and begin to address the question of why are we here? There are several techniques to help academic libraries or information centers to achieve this. Perhaps, the most widely used technique is strategic

planning which this paper attempts to address. Automation is the reality of the present age of information technology. It is therefore important that an academic library is automated so as to be effective and efficient in carrying out its mandate of information provision and satisfaction of the users' information needs. Funding library automation project requires high amount of capital and therefore must be planned for to ensure a successful completion. Looking critically at the importance of maintaining a high standard university education in the 21st century information age, the following major sources of funding the library automation project are recommended:

- Teaching/ research equipment fund
- Educational Trust Fund Intervention.
- Library development fund; that is the 10% of the total recurrent budget of the university as recommended by NUC.
- External donor organization example, UNESCO, Ford Foundation, World Bank loan etc.

More so, library can solicit for some of the hardware and software components from organizations like, the MacArthur Foundation of USA, Raw Material Resource Development Council of Nigeria (RMRDC), International Institute of Tropical Agriculture, Ibadan, Nigeria, (IITA) Central Bank of Nigeria (CBN) and Petroleum Trust Fund (PTF) etc. and

These however, must be based on effective planning strategies by the managers of the library, information centers or the librarian of the academic library. All the staff or stakeholders must be educated on various types of electronic devices which are available so that they should have a background idea on what to do whenever any situation arises. Academic librarians must reinvent themselves as dynamic engine of knowledge in the society.

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