ESTABLISHMENT OF HYBRID LIBRARY SERVICES IN FEDERAL UNIVERSITIES OF THE NORTH-CENTRAL ZONE OF NIGERIA

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CHAPTER ONE

INTRODUCTION

Background to the Study

A university is an institution which is engaged in both transmitting and expanding knowledge. According to Lungu (1995) the mission of the University is to satisfy special or general needs of a nation through teaching, research and community service. In pursuance of this mission, the University as well as the librarians are indispensable partners in actualization of the educational objective of the university. Lawal (2000) listed these objectives as: advancement of knowledge through research, dissemination of knowledge through teaching and service to the community.

University libraries according to Elemide and Harvard – Williams (1996) form a distinct category in the general pattern of library services. The prime function of the university library is to provide facilities for research to its clientele as the library is a crucial centre for any community, particularly in any academic pursuit. The character and efficiency of a university may be gauged by the treatment of its central organ, the library. A library is not only the basis of all teaching and study, but also an essential condition for research without which additions cannot be made to the sum of human knowledge. (Tinker, 1995).

The University library is a repository of information resources. Morgan and Smith (1997) stated that, library resources are very valuable either for the information they contain or for their physical beauty. The materials stocked in University libraries are meant to be source of knowledge, pleasure and assistance for generations to come. It is therefore safe to say that much of the success of the university library in achieving the set objectives depend largely on the nature of the resources it possesses. These resources are the traditional information resources which include, books, journals, maps, encyclopedia, dictionaries, newspapers and periodicals; while the modern information resources includes the following;
CD ROMs, audio-visual materials, e-books, e-journals, e-thesis and dissertations, DVDs, computer systems/Files, internet and communication gadgets.

It is imperative that the university libraries and its resources be within the reach of the users in order for them to broaden their knowledge and make meaningful and effective contribution to the development of the nation. (Bazzillian and Braun 1995). It is equally important to understand that, the university library perform the following traditional operations and services namely: cataloguing, circulation, acquisitions, reference, serials, bibliographical compilation. However, rapid advances in information processing, storage and communication technology have revolutionized the roles of university libraries worldwide in disseminating information service to their users as a result, university libraries are facing new challenges, new expectations, and variety of information services from users tailored to their wants and needs.

Tiwari, (2002), stated that University libraries, are now reconsolidating their position, redesigning their services and information products, incorporating new technologies, upgrading information resources, training people, changing information models of communication and information delivery in order to add value to their services and to satisfy the changing information needs of users community. Without doubt, the traditional library information resources require transformation owing largely to its inherent shortcomings which according to Lancaster (1978), are: slow speed of retrieval, inability to cope with large volume of information resources, cumbersome nature of information resources, poor services, unskilled staff, lack of proper organization of information resources.

In higher education and human capacity building, there are significant patterns of change because modern information resources are impetus for change in traditional concepts of teaching and learning. Arora (2001), stated that modern information resources has impacted strongly on the traditional library service through: On-line Public Access
Catalogue (OPAC), user service, reference service, bibliographic service, current awareness service, audio-visual service. It has also affected the traditional library resources with the availability of e-journals, e-books, access to web based resources, abstracting and indexing on CD ROMs.

It is therefore safe to mention that modern information resources are effective and efficient in the discharge of university library service. According to Sandaro (2001) modern information resources offer convenience of time and space, cost effectiveness, faster and most up-to-date dissemination of information for end users involved in the library service process. Equally, OPAC use power of computers to search out library materials and also provide many additional benefits such as on-line reservation of books, remote access, requesting books for loan, loan renewals and book suggestion.

It is interesting to note that over the years more librarians have continually advocated for the use of modern information resources to displace traditional information resources especially in the university libraries. One of such is Lancaster (1978) a strong proponent of a ‘paperless society’, who warned the society to expect and be fully prepared to embrace the adoption and use of strictly electronic information resource in transactions. He was especially concerned about the library and warned that it should be ready for this transition process and that failure to adapt, may lead to disruption and chaos in library services. But then, the question that arises is; should there be over-dependence on modern information resources to provide services for university libraries in view of its shortcomings which according to, Minishi (2004), Manda (2006), Ikoja (2006) are: Poor funding and sustainability of the technology in developing nations, poor competency and expertise, low levels of access by students, lack of support staff, need for more computer training for students, inadequate infrastructure for supporting the integration of ICT’s.
However, Walton and Edward (1997) proffers a solution to this contentious issue when they agreed that, the management of traditional information resources will for the foreseeable future run parallel to that of modern information resources, and both playing complementary role. Equally, Rusbridge (1998) believes that paper based and other non-digital resources of information will always be of major importance. It seems very unlikely that sophisticated technology for representing them will ever replace the original and their value to research and learning. This then, is the basis for a hybrid library service.

The term ‘hybrid’ is often used in descriptions of activities or services that combine two established features. For example, the term hybrid manager was in vogue in the 1970’s and 1980’s for managers of information technology in the United Kingdom. Rushbridge (1998) defined hybrid library as, a mix of traditional print library resources such as books and magazines, as well as the electronic based materials, such as; down loadable, audio books, e-journals, e-books. Similarly, Pinfield (1994) stated that, hybrid library is the permanent and equal inclusion of the traditional information resources alongside the modern information sources. Simply, a hybrid library is a library which works both in the electronic or digital and print environment, a transitional state between print and digital environment.

The earliest use of the term, ‘hybrid library’ was by Sutton (1996) in his consideration of information service models. Sutton identified four types of libraries in a continuum running from the traditional to the digital, - traditional, automated - hybrid and digital. He further stated that, there will be an inevitable shift along the continuum from library as a place to library as a logical entity where there is coexistence of traditional and digital collections and the possibility of totally unrestrained access to digital resources located elsewhere to which the library subscribes to.

The hybrid library is designed to bring a range of technologies from different sources together in the context of a working library and to begin to explore integrated systems and
services in both the electronic and print environments. (Lorcan, 1998). Therefore the hybrid library should not only be seen as an uneasy transitional phase between the conventional library and the digital library but rather as a worthwhile model in its own right which can be usefully developed and improved upon.

Pinfield (1998) has highlighted a number of issues to be addressed to ensure the effective transition to hybrid library service. According to him, Information professionals need to acquire new skills, decision-makers in the institutions need to recognize the potentials of this new development in supporting teaching, learning and research, commercial providers must continue moves to provide more tolerable products, information users must be assisted to develop new approaches to seeking and using information sources, proper funding from appropriate quarters, sound policy and implementation.

It is pertinent to have an understanding of the background of these five Federal Universities of the North-central Zone of Nigeria. According to the university website, uniabuja.edu.(2009), University of Abuja was established on January 1st 1988 (under Decree no. 110 of 1992 as amended) as a dual mode university with the mandate to run conventional and distance learning programme, it is the first university in Nigeria to assume such a dual mandate, it is thus committed to and seeks academic excellence while ensuring equal education; access to a diverse constituency thus preparing students for productive roles in the society. University of Abuja library was established in 1988 the same year the university was founded. The main library is located at Gwagwalada campus. It has a seating capacity of 2,000 seats. The attempts to integrate its information resources into hybrid services began in 2005 and still in progress. Hybrid service facilities such as the internet services, on-line database, CD ROMs, e-journals are provided to assist teaching, learning and research purposes.
The Federal University of Technology, Minna is equally a Federal Government owned University in Nigeria. It was established on 1\textsuperscript{st} February, 1983. The objective for the establishment of this university is to give effect to the nations drive for the much needed self-reliance in Sciences, Engineering, and especially Technology. It is a specialized University of Technology. (FUT.edu., 2009). The university library of Federal University of Technology, Minna otherwise known as Ibrahim Babangida (IBB) library was established in 1983 at the creation of the university. The main library has an annex at Bosso campus, in all the libraries have a 2,200 seating capacity. The university library has attempted to integrate its services, particularly the serials section in the last six years. This has resulted in the conversion of some of their journals into digital form and subscription for e-journals, on-line database and WebOPAC.

In the same vein, University of Ilorin was established by a decree of the Federal Military Government in 1975 and it is a Federal Government owned tertiary institution of education located in Ilorin, Kwara- State, north central, Nigeria. It was established in order to implement one of the educational directives of the country’s Third National Development Plan aimed at providing more opportunities for Nigerians aspiring to acquire university education and to generate high level man-power so vital for the rapidly expanding economy. The library of University of Ilorin was established in 1976 and has a seating capacity of 2,400. The library is making serious efforts at integrating its information services particularly the serials section through provision of e-journals, which is complementing the physical resources. Also provided are CDroms, databases and OPAC Website which the library subscribes to (unilorin.edu.,2011).

In addition, unijos.edu.(2010) stated that the University of Jos, started as a campus of the University of Ibadan in November, 1971. In October 1975, the then Military Government announced the establishment of seven new universities, including university of Jos which was
established with the vision of being an innovative institution with great interaction between; town and gown. The university today, carries a high responsibility of fashioning tastes and attitudes of the future. It is committed to providing education that is globally competitive and relevant to the needs of today’s employer and the developing challenges of Nigeria and beyond. The university library of University of Jos was established in 1975 and it is as old as the university itself. It has a 2,350 seating capacity for readers. The library is also in the process of integrating its information resources in the last six years, though with little progress. What has been provided so far are: internet services, e-journal and digital format of physical resources, subscription to OPAC Website.

The Federal University of Agriculture, Makurdi is located in Makurdi, the capital of Benue State of Nigeria. It occupies an arable land area of 8,048 hectares, thus making of the largest holder of agricultural land mass amongst institutions of its kind. By Federal Operation Policy, the University of Agriculture, Makurdi mandate covers 60% of Nigeria, with nineteen (19) Northern states of the Federation and the Federal Capital Territory as its catchments area. The integration of teaching adaptive research and extension learning approach of the university has created a demanding and intellectually stimulating environment for students. Federal University of Agriculture, Makurdi otherwise known as Francis Idachaba library was established in 1988 when the university was established. It has a modest seating capacity of 1,550. It is just starting a process of integrating its information resources. What is presently available in the library is internet services, e-journals with its physical copies (uniagric.portal,2011).

The five Federal Universities of the North-central states operate library services which are to provide resources for research, teaching and learning. However, the information resources presently available in these libraries are not adequate to meet the yearning needs and requirements of its teeming population of users, as such there is a strong need for
improvement of resources. This can only be achieved by integrating the available traditional information resources with the incipient modern information resources to create a comprehensive information resource base that is capable of providing satisfactory service to users of university libraries, which is the, ‘hybrid library service’. (Joint Information System Committee, 1995).

However, it is noteworthy to state that, the status quo of the establishment of hybrid library services in the university libraries of the five Federal Universities under study is still relatively new. It is a new phenomenon that will take some time to develop fully and impact positively on users.

The researcher believes that the adoption of the use of hybrid library service by these university libraries will afford users the following benefits: Seamless access to the most appropriate information resources in whatever medium be it sound, print and digital; affording convenience and flexibility to learners by reducing environmental impacts, bridging the gap between the traditional library and electronic library; creating new ways of communicating and disseminating research findings and facilitating discussions among researchers; facilitating resources discovery beyond the physical limitations of the physical library; permanent and equal inclusion of print information sources alongside the electronic sources and encouraging the concept of a life-long learning through use of modern information resources.

Statement of the Problem

Information is vital for the healthy growth and development of any community. Information is available today in many formats and librarians in the university libraries should be concerned with providing information in the best formats most suitable for users of their libraries since they are by virtue of their profession, information gate-keepers. It should
be noted that, university libraries are repository of information resources in both the traditional and modern format.

However, the continued frustrations suffered by university librarians and users (students and lecturers) in the university libraries of the Federal Universities of North-central zone of Nigeria as a result of dearth of current, up-to-date information resources, including accessibility to such and the attendant high cost of purchasing books and other information materials; are posing serious threats to learning, teaching and research activities.

There is a strong contention that, modern information resources should constitute significant and inherent portion of the information carrying medium in university libraries in Nigeria because of its tested abilities over the traditional information resources which are: cost effectiveness, faster and most up-to-date dissemination and end-users involvement in the library service process; convenience of time and place of service.

In spite of these obvious advantages of the modern information resources over the traditional resources, there is a strong view that, both should play complementary roles in providing comprehensive information resource base and services capable of satisfying the growing and yearning information requirements of users of libraries of these federal universities of the North Central States of Nigeria. This complementary role is the hybrid library service.

The researcher believes that, if the processes of establishing hybrid library service in the libraries of these Federal Universities of the North-central states are taken for granted, the attendant benefits of hybrid library service may not be realized and this, is what the researcher seeks to investigate, so that the rich information resources available in hybrid library service are properly harnessed by users of the libraries of these Federal Universities of Nigeria.
**Purpose of the Study**

The general purpose of this study is to investigate issues involved in establishing hybrid services in five federal universities of North Central zone of Nigeria.

Specifically, the study is conducted to:

1. Examine the need for hybrid library service in libraries of the Federal Universities of north-central zone of Nigeria.
2. Determine the hybrid library services available in these libraries.
3. Identify the extent of effectiveness of hybrid library service in the libraries of these Federal Universities.
4. Determine the problems involved in establishing effective hybrid library services in these Federal University libraries.
5. Highlight strategies for effective operation of hybrid library services in the libraries of these Federal Universities.

**Research Questions**

The following research questions were formulated to guide the study:

1. What are the reasons for hybrid library services in libraries of the Federal Universities of north-central geo-political zone of Nigeria?
2. What are the hybrid library services available in these libraries?
3. What is the extent of effectiveness of hybrid library service in these libraries?
4. What are the problems involved in establishing effective hybrid library services in these libraries?
5. What strategies can be employed in achieving effective hybrid library services in the libraries of these Federal Universities?
Significance of the Study

This study is important, significant and timely at a time when there is an urgent need to blend the traditional library information resources with the modern information resources in dispensing timely information to aid teaching, learning and research purposes. This study will hopefully be of immense benefit to university libraries in the Federal Universities of North Central states of Nigeria and users comprising students and lecturers in the following ways:

The university libraries would observe and correct relevant aspects of their library service that are defective and in which improvement is required to make library service better to the overall advantage of stakeholders. The information yearning needs of users of university libraries can only be satisfied by providing information in the best formats possible for their use. The integration of the traditional resource and modern information resource formats will produce comprehensive information service that will best satisfy the information needs of the users as they are now exposed to seamless access and to the most appropriate resource in whatever the medium, whether print, sound and digital.

In addition, the university librarian will learn to adopt better strategies to deliver quality service to the stakeholders involved in the use of the library. The adoption and use of the integrated service, which is; the hybrid library service will offer the university librarian effective facilities that will assist in boosting his level of efficiency in providing quality service to stake-holders of the university library.

The users of these Federal University libraries will develop more confidence in the librarian and become attracted to make better use of library service. The adoption of the hybrid library service will make the librarian versatile in providing information in different formats for users. The components and technologies available in hybrid library service will further complement the efforts of the university librarian in providing quality information
service to users which in turn translates to more confidence in the library by user’s community.

The researchers will benefit tremendously as quality information resource will now be made available to enhance their research efforts. Researchers will be exposed to information resources medium which enables them to search, locate and request all resources available in whatever format easily and quickly from desktop and have printed items from outside their own institutions delivered to them efficiently and effectively.

Government attempt at revolutionizing information resources and services presently, will benefit from the study. Information technology which is the bedrock of national survival and development in a rapidly changing global environment has found its roots in all human endeavours. Its impacts is now felt in all facet of our life such as e-mail communication, e-payment (finance), e-marriage (family) and most importantly the e-library as it affects the university libraries in providing quality service to the user community.

Scope of the Study

This study covers the Establishment of Hybrid Library Services in the Federal Universities of north central geo-political zone of Nigeria. The researchers’ choice of north-central geo-political zone of Nigeria is because of proximity and accessibility to the researcher, and because no study has yet been conducted on this topic in this zone.

The researcher covered the important areas of this work which comprises the following: the reasons for hybrid library services in federal universities of North-Central zone of Nigeria, the various hybrid services available in these federal university libraries, the extent of effectiveness of hybrid library services in these university libraries, the problems involved in establishing effective hybrid library services in these libraries and the strategies
to be employed in achieving effective hybrid library service in these federal university libraries of the North Central zone of Nigeria.
CHAPTER TWO

REVIEW OF RELATED LITERATURE

The review of related literature for this research work is organized under the following sub-headings:

- **Conceptual framework**
- Historical antecedent and development of the hybrid library service.
- Convergence of traditional and modern information resources into the hybrid library service.
- Benefits of hybrid library service
- Facilities for hybrid library service
- Problems of operating a hybrid library service
- Strategies towards solving the problems associated with effective operation of hybrid library service.
- Review of empirical studies
- Summary of the literature review.

**Conceptual Framework**

The basic rational behind the establishment of any service, is the need and demands for such by users. The establishment of any service is usually not an easy task, because well meaning considerations and necessary steps would be taken to provide effective service to satisfy users needs.

According to Ross (1998), the establishment of any service is, the ‘process of creating service to satisfy the growing demands and needs of a user population’. In establishing a service, the following procedure would be taken into consideration namely: the need to prepare a plan of action, draw out a list of objectives, taking decisions about the nature of
location of service, raising necessary capital; the physical and natural resource, the benefits that the service will offer.

The hybrid library is defined by the electronic library programme (1994) as, the bringing together of technologies from the electronic, digital or virtual library projects which have been taking place round the world as well as in the United Kingdoms e-lib. Programme, plus the electronic product and services already in libraries and the historical functions of our local, physical libraries. Pinfield (1998), believes that without doubt, the hybrid library service has become the most appropriate information resource for use by university libraries, because the integrated nature of the hybrid library service reflects the need to respond to the information needs of a growing, diverse, demanding students population in the universities.

However, Day & Walton (1990) believe that, information providers in the university libraries would have to address the following issues in establishing an effective hybrid library services: balancing new electronic and traditional resources, need for information staff to develop more complex information handling skills, increased workload for staff, provision of support for users within and beyond the library, provision of technical supports within information services, growth of an end-user culture, the importance of an institution wide information strategy.

In the same vein, information users of hybrid library service in university libraries will have to address the following issues in order to enjoy the establishment of this service: awareness of the new resources, awareness of electronic resources, acquiring more complex information handling skills, access to support particularly for remote access, knowledge of the limitations of the provided resources. (Pinfield, 1998).

The hybrid library will be a managed combination of physical and modern information resources. Young (1993) is of the view that, access to information is presently compartmentalized in an unnatural way and that hybrid libraries will have to provide
information in whatever format that is appropriate via: the print, electronics and modern information resources. The contemporary information user especially in university libraries now has to operate in a hybrid environment where modern information and paper-based resources are available. Dempsey (1998) maintains that this process involves the continual integration of modern information resources to allow users access to a variety of information resources simultaneously through a single user inter-face.

It is important to note that, the impact of sophisticated technology on library services, and its application in one hand and the huge growth of literature on the other hand, has forced library professionals to ponder over the matter on how to satisfy university library users information requirements.

This plan to harmonize information resources in university libraries was supported by (Rusbridge 1998) who agreed that, the needs of information seekers in university libraries can only be realized by providing them with access to both the modern information and traditional information resources. This factor more than anything else is what has produced the term, hybrid library service.

**Historical antecedent and development of Hybrid Library**

The idea of a hybrid library first originated from the United Kingdom in the 1990’s, it was an answer to the question of seeking an appropriate information resource base that will address the incorporation of the traditional and modern information resources. (Rushbridge, 1998). He also raised a germane question by asking, “how on earth are we going to manage all our massive and growing collections of traditional and modern information sources in a coherent way for the benefit of library users?” This, he agreed, is by harnessing and exploiting the new technologies in appropriate ways.
The Joint Information Systems Committee of the UK’s Higher Education Funding Council chaired by Professor (Sir) Brian Follett in 1995, set up the Follet Review, which is charged with the responsibility of carrying out study into, how to integrate the modern information resources, in order to address the pressure on library information resources that will obviously arise with massive students admission in the UK’s Universities and Polytechnics, the issue of support infrastructure and the comparability of resources for degree level programmes in the UKs’ universities, and the growing influence of the world wide web with its attendant new paradigms for research, teaching and learning. (Joint Information System Committee, 1995).

The Follet Review submitted its report in 1996, which was an amalgam of responses to both the traditional and modern information resources, which assisted greatly in understanding that, a hybrid library approach would be necessary in addressing the information requirements of library users in the university libraries, what is however common to the establishment of the hybrid library service, is the issue of integration of resources. The JISC circular 3/97 (1997) views, this integration as, combining technologies with the modern information services already in existence in libraries and the historical functions of physical libraries. The belief behind this assertion according to Knight (1995) is that, the hybrid programme will be a success if it created models that organized seamlessly, the range of accessible materials both in the traditional and modern information formats.

The hybrid library is still evolving and is giving a positive direction, exemplified in the varying degree of models it represents which attests to its growing influence. MODELS (Moving to Distributed Environment for Library Services), a hybrid library support studies project, in the UK’s, has introduced, Models Information Architecture (MIA) which covers a range of formats from books to libraries and the collections within collections.
Dowler (1997) discusses another model which refers to the hybrid library as, ‘gateway library’, which is a bridge between the traditional library and the incipient electronic library.

The e-lib programme (1994) mentioned the ‘Hybrid Information Environment’, this is where a range of heterogeneous information services are presented to the users via a single user inter-face both in the traditional and electronic format.

Dempsey (1998) identified, ‘Information Island’ as another model by recognizing that, the hybrid library will be an organized attempt to come to terms with the multiple Island that library services are increasingly becoming by reducing the differences in patterns of access and management between these Islands.

Another models is that, conceived by MODEL Workshop called ‘CLUMPs’ which recognizes that, On-line Public Access Catalogue (OPAC) needs to be networked in order to alleviate the adverse effects of different user interfaces which could be physical where records are collated to form union catalogue or electronic using network protocols such as Z39.50.

What is a common feature to all these models of hybrid library service is the issue of ‘integration of information resources’, which is central to understanding reasons for the adoption of hybrid library service for the university libraries.

However, the Joint Information Systems Committee Circular (1994) gave impetus to the e-lib. Hybrid library project to conduct studies into the possible areas and address the issue of developing the hybrid library service, by addressing the need of the institutions; the user and the librarian, and work towards the resources.

There were two phases in this early part of the development of the e-lib. Hybrid Programme: JISC (1994) Phase I and JISC (1995) Phase II. The phase I of the e-lib Hybrid Programme, pointed out that; modern information resources could be adopted across our
traditional library service areas in new ways that will not continue to constrain library services. While Phase II believes, there should be deliberate efforts to encourage more cooperative solutions required seriously to consider the viability of the hybrid library project.

However, the common features addressed by these two phases are: electronic publishing, resources access, training and awareness and support studies.

In addition, JISC circular 3/97 (1995) introduced the e-lib Hybrid Programme Phase III which seeks an answer to the development of the hybrid library service, when it stated that: ‘the challenge now is to bring together technologies plus the modern information resources and services already in libraries and the historical functions of our local, physical libraries into a well organized and accessible hybrid libraries’.

The e-lib Phase III wanted good examples of a working hybrid library model and in the hope of achieving this aim, it sponsored five projects each with a slightly different approach. Breaks (2001) in his article, the e-lib Hybrid library projects’ highlighted these projects which are:

- **BUILDER** (Birmingham University Integrated Library Development and Electronic Resources). This is an institutional focused and highly service oriented which is built around stakeholders such as students, staff, senior institutional managers, library, and information professionals. It provides the enabling technical infrastructures for hybrid library service.

- **AGORA**, is system led and it is constructing a hybrid management system that will include facilities for search, locate, request and delivery service. It is responsible to the University of East Anglia, U.K. and in partnership with the U.K. office of library Networking (UKOLN).

- **HEADLINE** (Hybrid Electronic Access and Delivery in the library Networked environment). This is building a model of an institutional hybrid library by
incorporating various technologies at the London School of Economics, London Business School and University of Hertford in U.K.

- Malibu. (Managing the hybrid library for the benefit of users). It is subject focus and a multi-site project, which investigates the organizational and managerial implications of the hybrid library with the key sites at Kings College, London; University of Oxford and Southampton, U.K.

- Hylife. (Hybrid library of the Future), This concentrates on design and evaluation of different hybrid library user interface for different users group in different institutions particularly the department of information and library management of University of New Castle, U.K.

However, one of the key lessons to have emerged from the studies into the electronic hybrid library development is the need for integration of resources. Rusbridge (1998) mentioned resources that should be integrated as: legacy resources which are in printed form, those transitional in nature consisting of digitized resources already converted into electronic format, new resources, future acquisitions which are object-oriented digital resources.

There were further calls for bold visions and statements on the need for the development of the hybrid library. Knight (1998) in his book, the hybrid library: books and bytes, welcome a further stage in the work of e-lib Hybrid project which he referred to as, ‘a period of consolidation’.

Convergence of Traditional and Modern Information Resources into the Hybrid Library Service

The British Digital Library Programme, (1998) defines hybrid library as, a convergence in action which covers the traditional and modern information services. The traditional library system, is defined by Sutton (1996) as, ‘a specific place with a finite
collection of tangible information and it is geographically constrained’. The services provided by traditional libraries according to Chernick (2001) are: lending service, inter-library loan services, reservation service, current awareness service, user education information literacy programme, provision of seating and study facilities, exhibition and displays. Equally, information that is required in the traditional library appears in a variety of format. According to Aina (1999), they are classified as information carriers which are: books, serials, manuscripts, cartographic materials, graphic materials, sound recordings, motion pictures, and video recordings, microform digital materials.

There are however basic characteristics that are common to traditional library service, according to Hyper Librarian (1999) these are: emphasis on storage and presentation of physical items, cataloguing and classification, browsing based on physical proximity, and information assembled in one place.

Owing to the peculiar nature of the traditional library and the service it renders, it is incapable of meeting the information need of users. Hylife project (2002) attests to this and further draws up a list of problems users encounter when they attempt accessing information, they are: dearth of core textbooks, too many books on short term loans or quick reference leaving few copies on shelves, journals disorganized and books disorganized and left carelessly on tables, loan period rather too short, and slow delivery of ordered books.

Ansari (2003) listed other shortcomings of the traditional library service as: the limited buying power of traditional libraries, complex nature of recent documents and storage problems. All these factors, he concludes, are influencing a change to modern information resources. Dhaka and Arora (1995) highlighted other problems of traditional libraries as; inability to cope with global information explosion, searching problems, low cost of technology, environmental factors and new generation changes.
However, Glenn (2005) believes that traditional and modern information resources will co-exist and both will continue to grow rapidly. In fact, when using the tools found in the modern information resources, it will be difficult to ignore the traditional library resources as most of the records found in modern information resources refer to traditional sources. He also asserted that only an infinitesimal amount of information from traditional information resources are made available on the internet. Therefore, it is unwise to ignore the traditional information resources as they are rich in knowledge and unique in content. Dilerko and Gottlieb (2002) believe, that traditional information resources remain important for the information they carry.

However, the conservative librarians have often flaunted, the relevance of traditional information service. It should be noted that, the rapid strides made in modern information resources have changed the traditional methods of information dissemination and attitudes of information seekers Bancroft and Audrey (1998) attest to this, that users of university libraries have expressed dissatisfaction with traditional information resources collection such as: journals, books and conference proceedings. Libraries of all sizes and types are now embracing modern information resources. Tenopir (2003) however, agreed that, most libraries will continue to offer services in both the traditional and modern information resources format for many years to come.

The term, modern information resources has been defined by Ansari (2003) as, a managed collection of information with associated services where the information is stored and accessed over a network. The resources of the modern information includes: local database of traditional books in machine readable form, e-books, electronic taxmap, image sound video, multimedia microfiche, micro form e-journals, e-mail, audio-visuals.

There is a strong tilt in favour of the use of modern information resources by users of University libraries. Roger (2001) and Hiller (2002) agreed that, users are increasingly
positive about modern information resources and visit to the physical library by faculty and graduate students are down in many university libraries and are replaced by requests for use of modern information resources. At the University of Washington, between 1998 and 2001, graduate students in faculty of health sciences and engineering reported the most pronounced decline in visits to the physical library. Hiller (2003); Lenaes (1999) and Rogers (2001) in their survey of Ohio State University users from 1998 to 2000 found a steady increase in the use of modern information resources. Epic (2001) reports that, libraries that are concerned about a decline in visits to the physical libraries as a decrease in library usage, do themselves a disservice, as users now enjoy the convenience and other benefits of modern information resources. It suffices to mention here the advantages of using the modern information resources, which according to Cyric and Deshrunkh (2002) are: multiple access, absence of physical boundary, round the clock availability, structured approach, information retrieval is user friendly, high quality of preservation and conservation, unconstrained space, and good networking.

Lenares (1999) discusses the advantages further, when he cited: convenience, timeliness, and the ability to search text very conveniently. Other advantages derived in the use of modern information resources, according to Liew, Foo and Chennupati (2002) and Woodward (1997) are: ability to search for information promptly, and currency of materials. Equally, Ray and Day (1998) mentioned other advantages of using modern information resources as: having access to a wider range of information and faster access to information. In England, Tilburg University, Faculty of Medicine students cite timely availability of information resources, full text searching and access from home as the factors that promote the use of modern information resources in their library.

Although, the benefits of the use of modern information resources far outweighs that of the traditional information resources, users still express some concerns about the
shortcomings of the modern information sources. According to Nelson (2001) Palmer and Sandler (2003) and Woodward (1997), users complain about the discomfort of reading from the screen and poor graphic quality of information. Dillon and Hahn (2002) mentioned that over-dependence on use of modern information resources may make users not aware of the relevant resources in the library collection. In the same vein, Koteswara (2002) mentioned other shortcomings which are: lack of standardization, quick degrading of properties of information resources and effects of computer viruses. Other shortcoming according to Ravichandra and Suma (1996) are: issues of preservation of digital resources, high cost of procurement, environment, efficiency, decreasing speed of access.

The University libraries are to satisfy the information needs of its teeming users for the purposes of research, teaching and learning. In pursuant of these objectives, the university library will have to provide information resources in different formats to satisfy the yearning needs of information seekers in both the traditional and modern formats.

However, the traditional and modern information resources, have exhibited their strengths and weaknesses, factors that have shown that no single information system is capable of addressing and satisfying users’ information demands in university libraries. In this respect therefore, there is urgent need to integrate these two information service to bring about a comprehensive information resource base. Lesk (1997) mentioned that most commentators now believe in the integration of the traditional library service with the modern information resources and that the switch to access rather than purchase should leave us with better future collections.

Dempsey (1998) believes that, the university library must become a service organized around traditional and modern information resources. Khan and Shakeel (2003) says that, modern information resources are not going to completely replace the traditional resources; rather the important information seeking behaviour and browsing through journals is done in
both information resources. These assertions by various commentators for integration of the
traditional and the modern information resources have re-enforced the argument for a switch
to a ‘Hybrid Library Service’ which is appropriate in providing adequate information within a
university library system.

**Benefits of Hybrid Library Services**

The ultimate aim of the hybrid library service according to Oppenheim and Smithson
(1999) is to give the library users seamless access to the most appropriate resource in
whatever the medium whether it is print, sound and digital. Writing further, Al-ansair (1999)
highlights that, the hybrid library affords access to quality education, affordable education,
convenience and flexibility to learners in many contexts and reducing environmental impacts.

Also, Malinconico (1998) mentioned other benefits of the hybrid library service, that,
it affords users an opportunity to access books and other physical information resources in the
library’s collection and digital copies of physical information resources which the library is
licensed to access on behalf of its users and information resource fully available on the
internet.

Equally writing on the benefits of hybrid library service, Rusbridge (1998) views the
hybrid library as an ‘Information environment’, that presents a heterogeneous information
service to users in a consistent and integrated way via a single interface. Dempsey (1998)
believes that, users can also benefit from the hybrid library service, because it is a process of
continual integration of electronic resources which allows users access to a variety of
resources simultaneously.

According to Ray and Day (1998), the hybrid library service is one response to
changes impacting on organizations such as the university library with the widening use of
information and communication technology and the adoption of the concept of a life-long
learning. The integrated nature of the hybrid library reflects the needs of a growing, diverse and demanding user population.

Gennaro (1997) posits that; hybrid library is, ‘a real world situation’, where libraries provide access to a range of different media and integration of different information resources which looks to the documentary sources of the past, even as it looks in the direction of the electronic sources that will be increasingly available in the future.

Writing further, MALIBU (1998) which is focusing on the development of institutional models for the organization and management of hybrid library service, highlights that, the hybrid library is an environment where the physical and virtual service supports the professional activities of the users from the discovery of information, manipulation and early analysis of the delivered resources, whether in analog or digital format: local, national or international.

BUILDER (1998) an institution-based project of electronic hybrid library project which is aiming to develop a working model for hybrid library, opines that, the hybrid library has created new ways of communicating and disseminating research findings and facilitate discussions among researchers by extending its services beyond the physical limitations of the physical library.

The hybrid library is about organized access rather than local collections which become just a part of the means of delivery. There is a strong consensus that, the objective of any information resource base is to provide access to a coherent collection of materials more of which will be in digital format. Lynch and Molina (1995) agreed that, there is a reality, a very strong continuity between traditional library roles and missions and the objectives of digital library services.

Russell (1999) discusses the concept of hybrid research library that embraces the co-existence of print/achieve research library and electronic research library which enables
researchers in United Kingdom University research libraries; to search, locate and request resources in any format from desktop and have quick access to electronic resources, that have printed items from outside their own institutions.

It is pertinent to understand that, the needs of serious information seekers can only be met by providing the users with access to electronic and traditional information resources. The United Kingdom, e-lib, electronic libraries programme (1999) stated that, any modern quality library service, must endeavour to provide ready access to both types of resources, that is the traditional and modern information resources.

Equally, Oppeinheim (1998) explained that there is now a serious emphasis on copyright issues for many libraries and their patrons that are now using the digital items unlawfully, this will address the issue of unlawful use of copyright within a hybrid library service.

The National library of Australia in 1997, set up a working group to identify areas to be integrated in its library to position it for effective library service delivery to its users and came up with decision to integrate, its physical collections, significant and transient items, local and remote sources, whole and part resources. Integration of resources will provide any library particularly university libraries with adequate information resource base.

**Facilities for Hybrid Library Services**

Pinfield (1998) in his work, ‘realizing the hybrid library’ agreed that, a good number of existing facilities are to be used in providing the foundation layout for hybrid library service, they are:

- The Internet and Worldwide Website. They are components of modern information resources which play a major part in information delivery.
- The Z 39.50. This provides integrated searching over multiple databases.
- Common Indexing Protocol (C.I.P). It allows for database to provide summaries of information they hold.

- Dublin Core. It is useful both for searching across the various collections levels and in coordinating traditional and digital publication.

- Multiple Z39.50. It targets the library catalogue as it gives validity to union catalogue.

- Metadata. This is a mechanism that combines materials from printed books to videos, websites and museums and merges with multi-media side by side in one search.

- Storage and delivery of digital objects is an appropriate architecture where a single agency is responsible for both the digital objects and resources discovery service.

Equally, BUILDER (1998) one of the e-lib projects undertaking study of hybrid library services in U.K. has produced a number of models to illustrate the components of the hybrid library. They are:

1. Hybrid library search engine. This mechanism provides search facility across the e-lib hybrid library projects.

2. Thin client demonstrator. Provides inter-face to CD roms database via a web browser from anywhere on the internet.

3. TALIS tool box demonstrator. Developed for Birmingham University library’s management system, where catalogue records are extracted against profile information and presented to users with other personalized information.

4. Induction packages. This teaches novice how to use library information resources through the use of macromedia flash.

Headline, another e-lib programme also produced a number of other useful hybrid products, which are:
1. Sherlock. It is a database-backed product, which takes users from the shelf mark to an items physical location.

2. Smart Book Marks. A device that is user-centred and managed by personal information environment (P.I.E).

3. Authobroker. This is middle ware which managers the P.I.E. and licensed resources.

4. Resource Discovery Metadata (RDM). It contains metadata for P.I.E. managing discovery to access tools as well as resource metadata.

**Problems of Operating Hybrid Library Service**

A number of issues affecting the effective operation of the hybrid library service have emerged and are discussed under this literature. SCONUL (1999), for instance, issued a position paper on, ‘Information skills as a major requirement for users. The report of the paper showed that users require the following skills to properly operate a hybrid library service: ability to recognize need for information, ability to bridge information gap, ability to organize and communicate information, ability to locate and access information obtained from sources, ability to synthesize and build upon existing information, contributing to the creation of new knowledge.

Other areas of problem according to Hylife (2002) are: need for training and development of staff, integration among information service stakeholders. Heseltine (1998) further discussed the barrier to effective hybrid library service, when he mentioned the challenge of ‘space’ as he agreed that, the concept of information service and work spaces should not occupy separate spaces.

Equally, Garrod and Sidgreaves (1998) points to the attitude of staff to service as a challenge to effective service delivery in a hybrid library service. Nankivell (1999) mentioned other areas of problems to effective hybrid library services as: authority of
information sources and the role of publishers who could restrict access to information resources.

The issue of integration of information resources is one difficult area for librarians struggling to create useful and usable hybrid library service. Dowler (1997) posits that, in struggling to define the library of the future, librarians have often bolted new technology, programs and services into existing library functions without determining their relevance.

Another problem to the effective operation of the hybrid library service is the issue of collection development. Chowdhury and Chowdhury (2003) observed that the process of collection development in a hybrid library is similar to that of a traditional library, which is cumbersome.

Equally, Choemprayon (2006) mentioned the problems of digital divide as one area of challenge of the hybrid library service, the term digital divide, is used to describe the gap between those with modern information knowledge and those without it.

JISC (1995) a United Kingdom higher education libraries review believes that, the process of development of hybrid library service is hampered seriously by incompatibility in the activities and involvement of different governing and funding structures that work against the interests of information service providers.

Other challenges to effective operation of hybrid library service according to Arm and Blanch (1997) are the issues of: inter-operability of the search systems owned by different information vendors, and preservation of the digital medium of the hybrid library service from deterioration.

**Strategies towards solving the Problems associated with effective Operation of Hybrid Library**

In solving the problems associated with hybrid library service, SCONUL (1999) proffers a solution to solving the problem of necessary skills for users, by advocating for
necessary educational programme which should be designed for users with the hybrid library in mind through: introductory lectures on information skills, education on searching electronic bibliographic databases, education on searching the internet for information.

The British library digital library programme (1998) believed that, in solving the problems of training and development of service staff, there should be strong emphasis on competence and sense of creativity. This is the ability to handle a task or job in different ways when the situation changes which involves the adoption of new information technology that will change the perceptions of the librarian competencies.

In solving the problem of integrating information resources within a hybrid library service, Dempsey et al (1998) views the development of the hybrid library as web based which is believed to be the best environment to achieve integration of different services, since the web already provides a unified presentation layer through which many different resources can be accessed.

Heseltine (1998), addressed the issue of political divide and agreed that, one way to solve this problem is for information providers to work to integrate access for end users of information as far as possible across the political divides.

In solving the problem of ‘space’, within a hybrid library service, Hampson (1999) agreed that, the library as a physical space would change in the future to encompass new activities formats and equipment of the library, as library of the future will support diverse learning and research needs in various information resource formats.

Eaton (1998) discusses the strategy to solving the issues of authorization and authentication, which is a problem within a hybrid library service, when he mentioned that, there is now a plan in place by information providers of different systems within the hybrid library service to interact for greater information exchange to be achieved for maximum benefits of the users.
Preservation of the digital medium of the hybrid library, which is prone to deterioration, can be achieved through the following measures highlighted by Arms et al (1997): software in use should be constantly upgraded to reduce costs, emulator software should be displayed in its original format and digital information should be converted to standard media with standard format.

The problem of financial cost can be resolved in a hybrid library service in the university through resource sharing. Lancaster and Sandore (1997) are of the view that, the various participating institutions within a hybrid library network will resort to resource sharing and this will to a large extent reduce network charges which could at times be expensive as originators of information realises its value as a commodity.

Oppeinhein (1998) addressed the issue of copyright and how to solve this problem in the hybrid library service when he declared that, there is now a move to standardize copyright licenses for digitizing resources in hybrid libraries in higher education particularly in the United Kingdom.

**Review of Empirical Studies**

The researcher has highlighted the fact that, there is a dearth of empirical work on hybrid library service, what is presently available are projects on hybrid library development embarked upon by British Electronic Hybrid Library Programme in the United Kingdom, which are not empirical work.

Nonetheless, the researcher is drawing inferences from review of empirical studies conducted on some areas of information communication technology which has direct bearing with development in hybrid library service because the modern information resources which will be used interchangeably with information communication technology, is an integral component of the hybrid library service. According to Sandaro (2001), the emphasis is more
on modern information resources in the operation of the hybrid library services especially in the university libraries.

**The availability of I.C.T. facilities in Libraries**

In their work, the researchers, Idowu and Mabawonku (1999) carried out a survey study of information technology facilities and applications in some Nigerian research and university libraries. Twenty-two libraries were purposely surveyed for this study. Nine (9) of these are research institute libraries while the remaining thirteen (13) are university libraries. Sampling was restricted to only the Nigerian government funded universities. Two sets of questionnaire were issued to heads of libraries and librarians respectively to investigate the type of hardware and software available for use in the libraries. The major findings reveal that, all the libraries surveyed have access to computer facilities but at varying degrees. The researchers suggested that it is necessary that government provides adequate funding for complete computerization. The study is relevant to the present research in that, it is purposive sample of government funded libraries.

Ani and Bassey (2008) studied the availability and utilization of information and communication technology (ICT) in Nigeria law libraries for sustainable development. It is a survey design. The sample population was 44 law libraries using attendance list of a national working organized for law librarians on accreditation of law programme in Nigeria held in Nigerian Institute of Advanced Legal Studies, University of Lagos campus from June, 21 23, 2005. 27 duly completed questionnaires were retrieved and used for data analysis. The findings of their study reveal that Nigerian Law libraries are currently making progress to participate in global adoption and utilization of ICT for efficient service delivery. The paper recommends effective human capacity building and user education programme for sustainable adoption and utilization for Nigerian libraries. That, proprietors of Nigerian
Universities libraries should increase their level of funding in order to increase ICT integration. They also suggested that government should provide enabling environment such as stable power supply and relevant ICT policy to include lower tariff on all imported ICT equipment/accessories. The study is relevant as it studied the availability of ICT or modern information resources.

**ICT knowledge, use and Skills of Librarians.**

In his research, Ekoja (2007) focuses on the librarians, as he carried out a study on ICT knowledge, use and skills of librarians in Nigeria university libraries. He actually investigated the extent of ICT knowledge, use and skills of the librarians. In this study, he adopted a descriptive survey design using also questionnaires as instrument of data collection. The sample population is 140 librarians comprising of various categories of library staff. He used 20 universities as the scope of the study while the area of study is Nigeria. Out of this, 94 respondents representing 67.14% returned their questionnaires. Their responses were analysed using frequencies percentage and mean scores to organize the tables.

The findings of this study indicated that 30 librarians (31.91%) had ICT training as a component of their professional education in library school. But 49 of the population (52.12%) had ICT training on the job and 56 librarians (59.57%) had theirs through self efforts. The respondents skills in the use of the computers, communication, library application packages and networking were below average but above average in database operations as only 21.28% of the respondents could not create their own databases. The researcher also brought out some setbacks to ICT knowledge use and skills of librarians in Nigerian universities which include lack of training opportunities, inadequate curriculum
content, unwillingness of employers to facilitate training for their employees retroactive approach of librarians and relapse of ICT illiteracy due to lack of facilities to practice with.

Asadu (2007) conducted a survey on the use of ICT in special libraries in Enugu State of Nigeria. The research design was a descriptive survey. A total of 44 special libraries were identified within the geographical region. But the study was confined only to 11 special libraries that have ICT facilities. The data for the study was collected through questionnaire, interview and observational checklist. Six (6) research questions were distributed to the respondents comprising both librarians and para-professional librarians in these libraries.

The result of the findings showed that the measures taken to ensure maximum use of ICT facilities are not commensurate with libraries expected operational needs, that ICT facilities are sufficiently available in these libraries.

The researcher made the following recommendations: staff training on ICT use, provision of fund to improve on ICT facilities, amendments in the value of orientation pattern of administration and policy making.

**Application of ICT Literacy in Library**

In his research, Haneefa (2007) undertook a study on Application of Information and Communication Technologies in special libraries in Kerala (India). The study is a survey of librarians and library users, limited only to automated special libraries in Kerala. The method of data collection was questionnaire, semi-structured interviews with librarian and observational visits in the library. Frequency tables and percentages were used to analyze the generated data. The analyses revealed that, though the libraries had hardware, software and communication facilities to some extent, ICT based resources and services were not reaching the users to the expected extent. It also shows that the library automation in Kerala was largely commenced during the period 1900 - 2000. CDS/ISIS was used more in the libraries
than any other software; that the ICT-based resource used by the large percentage of the users was the e-mail. Most of the libraries were hampered by lack of funds, lack of infrastructure and lack of skilled professionals to embark on automation of all library management activities and application of ICT. A good number of the library users were not satisfied with the application of ICT in their libraries and indicated, ‘Inadequate infrastructure’, as their major reason for dissatisfaction.

The study also proposed a variety of measures of formal orientation and training on ICT for users to become more effective. The study is also relevant to the present research in that it discusses the application of information and communication technologies in libraries.

Igwebuike (2007) carried out a study on ICT application to library services in ECOWAS library Abuja: a case study. The study was a descriptive survey, a total of 100 respondents comprising librarians and users were selected for the study and a descriptive questionnaire and an observational checklist was used for data collection. The researcher used a simple random technique and simple percentage, frequency distribution table for data analysis.

The result from the analysis showed that ICT tools available in the library include computers, network facilities, On-line searching system, e-mail facility and projections, that, ICT are applied in cataloguing, reference services, and circulation; that, lack of fund, unskilled manpower and lack of fund, unskilled manpower and lack of infrastructural facilities necessary for full application of ICT were some of the problems encountered in the library.

The researcher recommended the following: the provision of funds for procurement of ICT facilities, staff and user training on ICT use and literacy provision of adequate infrastructural facilities.
**Benefits of ICT to Library Service**

In his research, Omololu (2007) discussed the relevance of information technologies to libraries in information centers, a survey of two special libraries in Nigeria. The research design for the study was a descriptive survey. The user communities of both libraries formed the population of the study, since there was no nominal roll of the users in the libraries, it was difficult to estimate the sample for the population.

The researcher used a systematic random sampling technique in order to select one from every three users that come to the library. Questionnaire with structured and open-ended questions were used for data collection and descriptive statistical tools such as mean, standard deviation and simple percentage were used in the data analysis.

The result from the analysis of data indicates that, information communication technologies are beneficial to the libraries surveyed, many of the conventional ways library operation has changed such as ordering, cataloguing, circulation and information retrieval. The study also found that the users find changing technology as a problem and complain of restricted access to information materials in the libraries as a result of the hurdles they are meant to go through in the process of seeking information. The researcher recommended that periodic user education and training on the use of I.C.T; that, the special libraries should relax their bureaucratic restriction to accommodating more users.

**Effects of ICT on University Libraries**

In their research, Iwiwhu and Eyekpegba (2009) studied the digitization of Nigeria universities libraries; from technological challenges to effective information delivery. Their aim was to examine the present digitization projects in Nigerian university libraries and the challenges they pose to effective information delivery.
In this study they adopted both qualitative and quantitative research methods using questionnaire as the major tool for data collection with observations as complementary instrument. The respondents constitute 40 professional and non-professional library staff drawn from both universities. Two research questions were devised to guide them, they are:

1. What are the present digitization projects in Nigerian University libraries?
2. What are the challenges they pose to effective information delivery?

The findings of this study revealed that the libraries lack written policy on digitization, inadequate ICT infrastructure and manpower. Inadequate fund and inadequate government support. Users are not given user education to enable them utilize the available digitized resources and services, these are challenges to effective information delivery.

The authors recommended that the findings will make for a more conscious effort in institutionalizing digital library services, formulation and implementation of digitization policies, introduction of user education library programmes and conscious staff training programme on ICT’s for university libraries in Nigeria.

Summary of the Literature Reviewed

The concept of the hybrid library is an ambitious one which is still at the evolving stage and for now the most potentially valuable issue to emerge from the library and information science world in the 1990’s. It is for now one of the greatest challenges for the opening decade of this millennium. The often repeatedly asked questions are: how on earth are we going to manage all our massive and growing collections of traditional and modern information resources, for the benefit of our users. This of course has to be through harnessing and exploiting the new technologies in appropriate ways.

The literature was reviewed under conceptual framework, where the issues of integration were discussed as the basis for a hybrid library service. Equally historical
antecedents and development that portrayed the origin and the various models of this service were highlighted. Hybrid library service models like: ‘Information Island’, ‘Information environment’, ‘Information landscape’, ‘gateway library’, ‘hybrid e-lib. Project’, ‘clumps’, were discussed and their relevance within a hybrid library service were also discussed.

In addition, the reasons for convergence of the various library information resources which are: integrating the traditional and modern information format into the hybrid library service, their strengths and weaknesses which were indicators and strong reasons for convergence were discussed.

Equally the benefits that are derived from operating a hybrid library service were strongly highlighted, which makes it for now the appropriate option for information service in the university libraries. The various facilities for driving the hybrid library service available from the United Kingdom, hybrid electronic library projects were further explained. The inherent problems that may militate against effective hybrid library service and possible strategies to addressing these problems were addressed.

As far as the researcher was able to espouse, no previous empirical work has been carried out on hybrid library service in University libraries, this is a serious gap in knowledge which this study is designed to fill.

However, the researcher was able to review and draw inferences from some empirical work on Information communication technology which is also referred to as modern information resources, that has direct bearings to developments in hybrid library service.
CHAPTER THREE

RESEARCH METHOD

This chapter is presented under the following headings: research design, area of the study, population of the study, sample and sampling techniques, instrument for data collection, validation of the instrument, method of data collection and method of data analysis.

Research Design

The research design used for this study is the descriptive survey research design. This is because the study which involves a large population in the university libraries of the Federal Universities of North-central zone lends itself to this research design. Aina (2002) giving support to this view, asserts that, descriptive survey research design had always been the commonest way for gathering information by seeking the opinion of individuals, the consensus of which is expected to provide a solution to the problem.

Area of the Study

The area this study covers is the North-Central zone of Nigeria. The geographical zone otherwise referred to as the North-Central of Nigeria comprises the following states: Benue, Nassarawa, Niger, Kogi, Kwara, Plateau and the Federal Capital Territory (Abuja).

According to Harrison (1990), the North-Central is a district geographical zone which separates the Niger Sudan from the forest land of Nigeria. It lies between 8° and 10½ North of Nigeria and comprises two-fifths the area of Nigeria and one-fifth the population of Nigeria.
The North Central zone of Nigeria has with five federal universities which lend credence to the quality of academic potentials produced from the zone as it is reported to be the intellectual base for the Northern Nigerian generally.

Population of the Study

The population of the study consists of one hundred and two (102) librarians in the five Federal Universities of the North-central zone (see Appendix I, table 1).

Equally, a population of users comprising students and lecturers are respondent. A total number of one thousand seven hundred and ninety-nine (1,799) and twenty three thousand and six (23,006) lecturers and students respectively are registered with the libraries of the five Federal Universities of North-Central zone. (see Appendix I, tables 2 and 3).

The five Federal Universities of the North Central zone are: University of Abuja, Federal Capital Territory; Federal University of Agriculture, Makurdi, Benue-State; University of Ilorin, Kwara-State; Federal University of Technology, Minna, Niger-State; University of Jos, Plateau-State.

Sample and Sampling Technique

The researcher considered a number of factors in determining the sample size of this study namely: the purpose of the study, population size and allowable sample error.

Therefore, the sample size of respondents used for this study is one thousand, four hundred and thirty two (1,432) for users comprising students and lecturers and also librarians respectively. Five percent was used to determine a sample size from student population and ten percent for lecturers all of which are from the population of 23,006. However, for the librarians, the entire population of one hundred and two (102) is used for the study.
The researcher used the proportionate stratified random sampling technique for the study which Ali (2006) agreed, is used to sample each stratum of a very large population of various strata.

**Instrument for data Collection**

The instrument that is used for the collection of data for this study is a seventeen (17) item questionnaire for university librarians, fifteen (13) item questionnaire for students and fourteen (12) item questionnaire for lecturers respectively titled: Establishment of Hybrid library Services Questionnaire (EHLSQ) for University librarians and users comprising: students and lecturers.

The questionnaires were made up of two sections: section ‘A’, deals with the background and characteristics of the respondents while section ‘B’, centred on generating data from the objectives of the study.

**Validation of Instrument**

The instrument was subjected to face validation. Copies of the questionnaire were given to the researcher’s supervisor and other expert lecturers in the department of Library and Information Science, Faculty of Education, University of Nigeria, Nsukka to validate.

These experts were requested to validate the EHLSQ items in terms of:

I. Clarity of Instructions to the subject.

II. Proper Wording of items.

III. Appropriateness and adequacy of items for the study.

IV. Relevance of the items to the purpose and research questions of the study.
The recommendations of these experts served as a guide to the modification of items in the instrument and this is done to ensure that the instrument measures what it is supposed to measure.

**Method of Data Collection**

The researcher personally paid a visit to these five university libraries of the North Central zone of Nigeria to administer the questionnaire. The researcher spent an average of three to four days in each of these libraries, during which time he used the service of some library personnel within the university libraries who by their training are professionally qualified to administer the questionnaire. These research assistants ensured that the questionnaires were adequately answered through proper monitoring and they eventually collected them. Copies of the questionnaires were handed over to the researcher who in turn properly scrutinized them and ascertained that they were properly answered.

**Method of Data Analysis**

Data was collated and analysed by using descriptive statistics; the frequency count, mean score, simple percentages and presented in tables where necessary. However, a criterion mean (a mid-point mean score) of 2.50 is adopted and any mean that ranked from 2.50 and above is regarded as positive whereas 2.49 and below is regarded as negative.
CHAPTER FOUR
PRESENTATION OF DATA

This chapter presents the data collected from the field. The data collected are presented in tables and analysed using percentages and mean scores. A total of 1,432 questionnaire were distributed to the five federal university libraries in North Central zone of Nigeria, out of this, 1,368 (95.53%) were returned.

The findings of this study and the analyses are presented according to the research questions which guided the study.

<table>
<thead>
<tr>
<th>S/No</th>
<th>Universities</th>
<th>Number distributed</th>
<th>Number returned</th>
<th>Percentage returned</th>
<th>Number lost</th>
<th>Percentage lost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>UniAbuja</td>
<td>373</td>
<td>358</td>
<td>95.78%</td>
<td>15</td>
<td>4.02%</td>
</tr>
<tr>
<td>2</td>
<td>FUT Minna</td>
<td>298</td>
<td>284</td>
<td>95.30%</td>
<td>14</td>
<td>9.60%</td>
</tr>
<tr>
<td>3</td>
<td>Uni Ilorin</td>
<td>323</td>
<td>313</td>
<td>96.90%</td>
<td>10</td>
<td>3.09%</td>
</tr>
<tr>
<td>4</td>
<td>FUA Makurdi</td>
<td>100</td>
<td>88</td>
<td>88%</td>
<td>12</td>
<td>12%</td>
</tr>
<tr>
<td>5</td>
<td>UniJos</td>
<td>338</td>
<td>325</td>
<td>96.15%</td>
<td>13</td>
<td>3.85%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1,432</td>
<td>1,368</td>
<td>95.53%</td>
<td>64</td>
<td>4.47%</td>
</tr>
</tbody>
</table>

Key:
UniAbuja- University of Abuja
FUT Minna- Federal University of Technology Minna
Uni Ilorin- University of Ilorin
FUA Makurdi- Federal University of Agriculture, Makurdi
UniJos- University of Jos

Research Question one: Need for hybrid library services in libraries of the federal universities of north central zone of Nigeria.
Table 2: Respondents view on the need for hybrid library services

<table>
<thead>
<tr>
<th>S/no.</th>
<th>Need for hybrid library services</th>
<th>Percentage response Yes (%)</th>
<th>Percentage response No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Satisfaction with traditional library services</td>
<td>588(42.98%)</td>
<td>780(57.02%)</td>
</tr>
<tr>
<td>2</td>
<td>Area of traditional library services that requires improvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>Borrowing system</td>
<td>88(54.32%)</td>
<td>74(45.68%)</td>
</tr>
<tr>
<td>ii</td>
<td>Staff response to users information need</td>
<td>87(52.10%)</td>
<td>80(47.90%)</td>
</tr>
<tr>
<td>iii</td>
<td>Shelving system</td>
<td>97(52.72%)</td>
<td>87(47.28%)</td>
</tr>
<tr>
<td>iv</td>
<td>Cataloguing system</td>
<td>105(63.64%)</td>
<td>60(30.36%)</td>
</tr>
<tr>
<td>V</td>
<td>Referral services</td>
<td>98(57.99%)</td>
<td>71(42.01%)</td>
</tr>
<tr>
<td>vi</td>
<td>Inadequate facilities</td>
<td>98(54.75%)</td>
<td>81(45.25%)</td>
</tr>
<tr>
<td>vii</td>
<td>Compilation of bibliographies</td>
<td>102(63.35%)</td>
<td>59(36.65%)</td>
</tr>
<tr>
<td>viii</td>
<td>Indexing and abstracting services</td>
<td>99(54.70%)</td>
<td>82(45.30%)</td>
</tr>
<tr>
<td>3</td>
<td>Short comings of traditional library services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>Information retrieval is slow</td>
<td>126(55.26%)</td>
<td>102(44.74%)</td>
</tr>
<tr>
<td>ii</td>
<td>Information resources not current and up-to-date</td>
<td>129(56.58%)</td>
<td>99(43.42%)</td>
</tr>
<tr>
<td>iii</td>
<td>Inability to cope with global large volume of information sources</td>
<td>116(50.88%)</td>
<td>112(49.12%)</td>
</tr>
<tr>
<td>iv</td>
<td>Poor resource organization</td>
<td>135(59.21%)</td>
<td>93(40.79%)</td>
</tr>
<tr>
<td>V</td>
<td>Poor attitude of staff to work</td>
<td>121(53.07%)</td>
<td>107(46.93%)</td>
</tr>
<tr>
<td>vi</td>
<td>Increase cost of books and materials</td>
<td>131(57.46%)</td>
<td>97(42.54%)</td>
</tr>
</tbody>
</table>

Relevant data were collected from librarians, students and lecturers who are users of the five Federal University libraries of North Central zone of Nigeria, using items 4, 5, 6, 7 and 11 in Establishment of Hybrid Library Services Questionnaire (EHLSQ) for librarians, students and lecturers alike to answer the research question.

The table above highlights the reasons why hybrid library services are needed in federal university libraries in north central zone of Nigeria. And here, table 2 indicates that 588(42.98%) of the respondents are satisfied with the way traditional library services are provided, while 780(57.02%) are not satisfied with traditional library services. In areas where traditional library services requires improvement, 88(53.32%) suggested that the borrowing
system should be improved, as against 74(45.68%); 87(52.72%) suggested staff response to users information need, as against 80(47.90%); 97(52.72%) suggested shelving as against 87(47.28%); 105(63.64%) suggested cataloguing system relative to 60(30.36%); 98(57.99%) for reference services relative to 71(42.01%); 98(54.75%) for inadequate facilities as against 81(45.25%); compilation of bibliographies 102(63.35%) relative to 59(36.65%); 99(54.70%) suggested indexing and abstracting services as against 82(45.30%). In response to shortcomings of traditional library services, 126(55.26%) sees information retrieval as slow compared to 102(44.74%) that did not; 129(56.58%) are of the view that information resources are not current and up-to-date, while 99(43.42%) did not; 116(50.88%) stated inability to cope with global large volume of information sources as against 112(49.12%); 135(59.21%); 121(53.07%) and 131(57.46%) are of the view that poor resources organisation; poor attitude of staff to work and increase cost of books and materials as shortcomings of traditional library services.

Research Question two: Hybrid library services available in the libraries of the five federal universities of North Central zone of Nigeria

<table>
<thead>
<tr>
<th>s/no.</th>
<th>Hybrid library services available</th>
<th>Frequency of response</th>
<th>Percentage response (%)</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Internet services</td>
<td>96(63.16%)</td>
<td>56(36.84%)</td>
<td>5&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>ii</td>
<td>On-line website</td>
<td>87(57.24%)</td>
<td>65(42.76%)</td>
<td>7&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>iii</td>
<td>CD-ROMs</td>
<td>101(66.45%)</td>
<td>51(33.55%)</td>
<td>4&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>Iv</td>
<td>e-journals</td>
<td>83(54.61%)</td>
<td>69(45.39%)</td>
<td>8&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>V</td>
<td>e-books</td>
<td>111(73.03%)</td>
<td>41(26.97%)</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
</tr>
<tr>
<td>Vi</td>
<td>e-indexing and abstracting</td>
<td>87(57.24%)</td>
<td>65(42.76%)</td>
<td>7&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>VII</td>
<td>e-thesis and dissertation</td>
<td>121(79.61%)</td>
<td>31(20.39%)</td>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
</tr>
<tr>
<td>viii</td>
<td>Computer files</td>
<td>102(67.11%)</td>
<td>50(32.89%)</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
</tr>
<tr>
<td>Ix</td>
<td>Web OPAC</td>
<td>88(57.89%)</td>
<td>64(42.11%)</td>
<td>6&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

This research question was aimed at finding out the hybrid library services available in the libraries of the federal universities of the North Central zone of Nigeria. To elicit data
appropriate to answer this question, item 9 for students and item 8 for lecturers and item 7 for librarians in the questionnaire ‘EHLSQ’ for students, lecturers and librarians were used as presented in table 3.

Table 3 highlights the following as respondents views on the hybrid library services available: internet services 96(63.16%); online website 87(57.24%); CD-ROMs 101(66.45%); e-journal 83(54.61%)’ computer files 102(67.11%) and WebOPAC 88(57.89%). While hybrid library services not available are e-books, e-indexing and abstracting and e-thesis and dissertations.

Research Question three: Extent of effectiveness of hybrid library services in these libraries

Table 4: Mean scores pf extent of effectiveness of hybrid library services.

<table>
<thead>
<tr>
<th>s/no.</th>
<th>Effectiveness of hybrid library services</th>
<th>Users mean X= ( \frac{\sum fx}{N} )</th>
<th>Librarian mean X= ( \frac{\sum fx}{n} )</th>
<th>Average mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Extent to which hybrid library services is operational</td>
<td>2.47</td>
<td>2.25</td>
<td>2.36</td>
</tr>
<tr>
<td>2</td>
<td>Extent to which hybrid library services is effective</td>
<td>2.32</td>
<td>2.43</td>
<td>2.38</td>
</tr>
</tbody>
</table>

The table above shows the extent to which hybrid library services in federal university libraries in the North Central zone of Nigeria are effective. Table 4 shows the various calculated mean scores for users and librarians to be 2.47 and 2.25 respectively and an average mean score of 2.36 which is less than the critical mean of 2.50 thus indicating that the extent to which hybrid library services are operational is less optimal in university libraries in North Central zone of Nigeria. Similarly, the calculated mean scores for users and librarians are 2.32 and 2.43, while the average mean score is 2.38 which is less than the critical mean of 2.50. This indicates that the extent to which hybrid library services are provided in Federal University libraries in North-Central zone of Nigeria in less effective.
Research Question four: Problems involved in establishing effective hybrid library services in these libraries.

Table 5: Respondents view on the problems of establishing effective hybrid library services.

<table>
<thead>
<tr>
<th>s/no.</th>
<th>Problems of establishing hybrid library services</th>
<th>Frequency of response</th>
<th>Percentage response (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Training and development of service staff</td>
<td>74</td>
<td>72.05%</td>
</tr>
<tr>
<td>ii</td>
<td>Problems of resource integration</td>
<td>71</td>
<td>69.06%</td>
</tr>
<tr>
<td>iii</td>
<td>Lack of skills by users</td>
<td>67</td>
<td>65.07%</td>
</tr>
<tr>
<td>iv</td>
<td>Erratic power supply</td>
<td>63</td>
<td>61.07%</td>
</tr>
<tr>
<td>v</td>
<td>Presentation of the digital medium</td>
<td>62</td>
<td>60.07%</td>
</tr>
<tr>
<td>vi</td>
<td>High cost of equipment</td>
<td>44</td>
<td>43.13%</td>
</tr>
<tr>
<td>vii</td>
<td>Authority and authentication of information sources</td>
<td>41</td>
<td>40.19%</td>
</tr>
<tr>
<td>viii</td>
<td>Attitude of staff</td>
<td>31</td>
<td>30.04%</td>
</tr>
<tr>
<td>ix</td>
<td>Absence of closer integration involving stakeholders</td>
<td>27</td>
<td>26.05%</td>
</tr>
</tbody>
</table>

Table 5. Only librarians in the five Federal universities of North Central zone of Nigeria answered this question. Data generated from item 14 of ‘EHLSQ’ questionnaire for librarians was used to elicit responses. It showed, training and development of service staff 74(72.05%); problems of resource integration 71(69.06%); lack of skills by users 67(65.07%); erratic power supply 63(61.07%); preservation of the digital medium 62(60.07%); high cost of equipment 44(43.13%); authority and authentication of information resources 41(40.19%); attitude of staff 31(30.04%); absence of closer integration involving stakeholders 27(26.05%); as problems of establishing effective hybrid library services in Federal university libraries of North Central zone of Nigeria.

Research Question five: Strategies that can be employed in achieving effective hybrid library services in the libraries of five Federal universities of North Central zone of Nigeria.
Table 6: Respondents view on the strategies for effective hybrid library services.

<table>
<thead>
<tr>
<th>s/n</th>
<th>Strategies for effective hybrid library services</th>
<th>Frequency of response</th>
<th>Percentage response (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Necessary funding</td>
<td>85</td>
<td>83.33%</td>
</tr>
<tr>
<td>ii</td>
<td>Regular power supply</td>
<td>82</td>
<td>80.04%</td>
</tr>
<tr>
<td>iii</td>
<td>Proper integration of information resources</td>
<td>65</td>
<td>63.07%</td>
</tr>
<tr>
<td>iv</td>
<td>User education/orientation programme</td>
<td>60</td>
<td>58.08%</td>
</tr>
<tr>
<td>v</td>
<td>Training and education of library staff</td>
<td>58</td>
<td>56.08%</td>
</tr>
<tr>
<td>vi</td>
<td>Effective preservation of digital medium</td>
<td>47</td>
<td>46.07%</td>
</tr>
<tr>
<td>vii</td>
<td>Closer integration among information providers</td>
<td>35</td>
<td>34.31%</td>
</tr>
</tbody>
</table>

This research question was answered by librarians only and it aimed at finding out the strategies that can be employed in achieving effective hybrid library services in the libraries of the five Federal universities of North Central zone. In order to elicit data, appropriate for this question, item 17 of ‘EHLSQ’ questionnaire for librarians was used as presented in table 6.

Table 6 indicates that, necessary funding 85(83.33%); regular power supply 82(80.04%); proper integration of information resources 65(63.07%); user education/orientation programme 60(58.08%); training and education of library staff 58(56.08%); effective preservation of the digital medium 47(46.07%); closer integration among information providers 35(34.31%); are strategies that can be used in achieving effective hybrid library services in Federal universities of North Central zone of Nigeria.

Summary of Findings

The following findings can be made from the study, a total of 1,432 questionnaires were distributed to the five federal university libraries in North Central zone of Nigeria, while 1,368 copies (95.53%) were returned. The study found that majority of the respondents are not satisfied with the services provided by the traditional library setting, traditional library services that requires improvement are the borrowing system, staff response to users information need, shelving, referral services indexing and abstracting and compilation of
bibliographies; in response to the shortcomings of the traditional library services. The study further found that informational retrieval system is slow, information resources are not current and up-to-date, while there is the inability to cope with global large volume of information sources, all of which points to the need why hybrid library services is implemented.

Meanwhile, the hybrid library services available are: internet services, on-line websites, CD-ROMs, e-journals, computer files and web OPAC, while the hybrid services not available are: e-books, e-indexing and abstracting, e-thesis and dissertations. The study further found that hybrid library services are not efficiently operated, the reason for these are due to lack of skills by users, lack of training and development of service staff, attitude of staff, authority and authentication of information sources, erratic power supply and high cost of procuring equipment. However, the solutions to these challenges have been suggested to be the use of user education/orientation programme, training and education of library staff, necessary funding, regular power supply, effective preservation of the digital medium and closer integration among information providers.
CHAPTER FIVE
DISCUSSION AND CONCLUSION

This chapter is concerned with the discussion of major findings, their implications and recommendations. Also included in this chapter are conclusions of the study, suggestions for further study and summary of the study.

Discussion of the Findings

The findings of this study are discussed in line with the objectives that were formulated to guide the study.

The need for hybrid library services in libraries of the federal universities in north central zone of Nigeria.

The result of this study as shown on table 2 revealed that majority of the respondents are not satisfied with the services provided by the traditional library setting and such requires improvement in the following areas: borrowing system, staff response to users information need, shelving, referral services, indexing and abstracting and compilation of bibliographies; in response to these identified shortcomings of the traditional library services, the study found that informational retrieval system is slow, information resources are not up-to-date, inability to cope with large volume of information sources, all of which points to the need for hybrid library services is implemented in these university libraries of the Federal Universities of the North Central zone. This is in line with the views of Hylife (2002) which argued that: owing to the peculiar nature of the traditional library and the services it renders, it has become incapable of meeting the information need of users. Similarly Ansari (2003) outlined the shortcomings of the traditional library services to include the limited buying power of traditional libraries, complex nature of recent documents and storage problem, while Dhaka and Arora (1995) listed inability to cope with global information explosion, searching problems. All of these point to the defect experienced as a result of the changing nature of
information need of users and the structure and feature of information which is reflected in
the new technologies produced to store and disseminate them. Fundamentally tied to these
change, is the need to adapt innovative approach to services provision in order to meet the
information need of highly sophisticated clientele within the academic milieu hence the
strong need to switch to hybrid library services which is the fusion of traditional library
services and modern information resources.

**Hybrid library services available in the libraries of the five federal universities in North
Central zone of Nigeria.**

The result of the study as shown in table 3 revealed the hybrid library services
available in the federal university libraries of the North Central zone of Nigeria as: internet
services, on-line websites, CD-roms, e-journals, computer files and web OPAC, while the
hybrid services not available are: e-books, e-indexing and abstracting, e-thesis and
dissertations. Supporting this view, Pinfield (1998) in a work titled ‘realizing the hybrid
library’ provided a substantial number of hybrid library facilities and services, some of which
are the internet and world wide web, metadata, storage and delivery of digital objects. The
study found out that, these hybrid library services are not adequate provided to satisfy users
requirement for teaching, learning and research purposes in these libraries. Similarly,
BUILDER (1998) in one of the e-lib projects outlined other hybrid library services such as:
search engines, CD-roms, TALIS tool box demonstrators. This helps to show the level at
which hybrid library services are provided in federal university libraries in north central zone
of Nigeria, which is mainly due to the fact that, both the services and facilities are still at their
infancy stage, due mainly to the fact that there is lack and absence of some of these services
which are more developed and used in advanced economies such as in North America and
Europe.
The extent of effectiveness of hybrid library services in the libraries of these federal universities.

The result of this study as highlighted in table 4 indicates that hybrid library services and its operation in federal university libraries in north central Nigeria are not efficiently implemented, in essence, it signifies that the extent to which hybrid library services is operational is less efficient and the services less effective. This may not be far from the fact that it is relatively new in these federal university libraries and also because of the technological disparities in less developed countries and advanced economies, as well as the historical perspective which is unconnected with the late start in hybrid library services in Nigeria. Choemprayon (2006) mentioned that the late start and the digital divide which is less favourable to less developed societies is a primary factor of inefficient hybrid library services provision, in these federal universities of Nigeria. The management of these university libraries must attempt to therefore, update the knowledge and skill of librarians in information technologies and adopt user education in information technologies in order to enjoy the benefit in hybrid library service.

Problems establishing effective hybrid library services in the libraries of the federal universities in North Central Nigeria.

The findings from table 5 shows certain problems federal university libraries in north central Nigeria face while implementing hybrid library services. These are lack of skills by users, lack of training and development of service staff, attitude of staff, authority and authentication of information sources and erratic power supply. Garrod and Sidgreaves (1998), Nankivell (1999) and Chowdhury and Chowdhury (2003) all outlined authority of information sources and the role of publishers who could restrict access to information sources; lack of information skills; incompatibility in the activities and involvement of different governing and funding structures that work against the interest of information
service provider and inability to effectively preserve the digital medium. These problems although applicable in more developed societies, but their intensity is more pronounced in Nigeria, due to late start of hybrid library service, lack of adequate ICT infrastructure and certain extraneous factors peculiar to the African continent and Nigeria in particular.

**Strategies for effective operation of hybrid library services in the libraries of these federal universities.**

The result of this study as shown in table 6, revealed the strategies for effective operation of hybrid library services in libraries of federal universities in north central zone of Nigeria. These are the use of user education/orientation programme, training and education of library staff, necessary funding, regular power supply, effective preservation of digital medium and closer integration among information providers. This position is supported by the study of SCONUL (1999), the British digital library programme (1998) and Dempsey et al (1998) all of whom suggested that the solution to the problems confronting effective hybrid library services provision are: training and development of services staff, integration of access for end users of information, funding; in terms of authorization of information sources, plans should be adopted by information providers to liaise with publishers; while financial challenges can be resolved through resource sharing by several university libraries.

**Implication of the Study**

Hybrid libraries have made their presence as invaluable tools for providing services in university libraries. The strength of the hybrid library as a tool for services provision is anchored on its ability to enhance research, achieve wider access to information and improve scholarship. Thus, the findings of the study have the following implications to university libraries, library management, authorities of the parent institutions and government.
The nature of traditional library services can no longer sustain contemporary demand for information, this is supported by the findings of the study which showed that most of the respondents are not satisfied with it and thus, prefer the hybrid library services. The implication of this finding is that providers of information sources for users would have to get attuned to current demand, and as well make provisions for the rapid changes that occur in the ICT facilities which are used as carriers and that hybrid library services is currently an indispensible prerequisite for effective information dissemination in academic libraries.

It is noted that some hybrid library services are provided in federal university libraries in north central geo-political zone, while others are not provided. The highlighted hybrid library services provided are internet services, on-line websites, CD-roms, e-journals, computer files and web OPAC, while the hybrid services not available are: e-books, e-indexing and abstracting and e-thesis and dissertations. The implication of this finding is that if more hybrid library facilities and services are provided and given staff proper training, staff in these libraries could use these services to meet clients information needs and as well fulfil the cardinal objectives and role of the university library. On the other hand, if the necessary training for staff are not provided and necessary hybrid facilities and services are equally not provided, the benefit derivable in hybrid library services will not be achieved.

It is found that the effectiveness of hybrid library services and its operation in federal university libraries in north central zone is less optimal, although this would not be unconnected to certain factors such as the digital divide, late start in implementation. The implication of this finding is that it is imperative for concerted steps to be taken to improve on hybrid library services, otherwise, most users of these university libraries would be denied the benefits that are derived from this veritable service.
The study also revealed the problems federal university libraries in north central Nigeria face while implementing hybrid library services. These are lack of skills, lack of training and development of service staff, attitude of staff, authority of information sources and erratic power supply. The implication being that addressing these problems would go a long way in improving hybrid library services; meanwhile, what is needed is for those concerned to provide user education/orientation programme, training and education of library staff, necessary funding, regular power supply and effective preservation of the digital medium. This would fast track the development and effectiveness of hybrid library services in federal university libraries in north central geo-political zone in Nigeria.

Recommendations

The following recommendations are made based on the findings of this study:

1. The university authority should make provision for the full migration of library services from its old services provision approach to conform to modern standard which in this context is anchored on ICT and reflected in hybrid library services.

2. The university authorities and library management should improve on the existing hybrid library services and facilities by purchase of and sharing of resources with cooperating universities.

3. The university authority and library management should commit more funds for training staff either through consultation of experts from outside or within the organization, or staff being sent on conferences and foreign studies.

4. Organizations, corporate bodies, alumni, individuals and government should be encouraged to intervene and support university libraries with funds to provide and sustain hybrid library services.
5. The university authority and library management should ensure that there is provision of regular supply of electricity in order to power the electronic equipment necessary for running hybrid library service.

6. The library management should ensure that the digital medium which is a component part of the hybrid library service is properly preserved in order to provide good service by ensuring that necessary training is given to the staff in-charge of this section.

7. The various governing bodies and information providers involved in provision of necessary information services for the smooth running of hybrid library services should avoid unnecessary rift among themselves rather the library management should encourage cooperation and understanding among them.

Limitations of the Study

The following challenges were encountered by the researcher in the course of conducting this study.

In some of the university libraries, a few number of the librarians had proceeded on their annual leave at the time the researcher was on visit to administer his questionnaire.

The researcher also faced the challenge of travelling to the university libraries as they were far apart from each other in five states of North-central of Nigeria.

However, the researcher was able to overcome these limitations, by using librarians within the libraries to get in touch with those supposedly on leave who fortunately had not traveled out of their stations. The librarians ensured that the questionnaires were properly answered, collected and retrieved to the researcher in three days. Secondly, the researcher devoted time, patience and energy to travel to and cover the five federal universities in the North Central zone of Nigeria within a space of three weeks.
Suggestions for Further Research

For the reasons of time constraints in covering all relevant areas, the following are suggested for further consideration by other researchers:

1. The sustainability of hybrid library services in university libraries in Nigeria.
2. The relevance of web OPAC in academic libraries in Nigeria.
3. The role of hybrid library services in serials management in university libraries in Nigeria.

Conclusion

The survival of library services in federal university libraries is anchored on the proper utilization and implementation of hybrid library services. This is because, these services are indispensible to current information dissemination. The researcher used the descriptive design for the study and raised five questions and five purposes to guide the study. The findings from the study revealed that the traditional library services on its own can no longer meet the information needs of patrons, thus, the need for more innovative approach to service provision which hybrid library services adequately meet. It also noted that certain hybrid library services are available; internet services, on-line websites, CD-ROMs, e-journals, computer files and web OPAC, while the hybrid services not available are: e-books, e-indexing and abstracting and e-thesis and dissertations.

It was further noted that hybrid library services and its operation in federal university libraries in north central Nigeria are not efficiently implemented, in essence, it signifies that the extent to which hybrid library services is operational is less efficient and the services less effective. This may not be far from the fact that it is relatively new in these federal university libraries and also because of the technological disparities in less developed countries and
advanced economies, as well as the historical perspective which is unconnected with the late start in hybrid library services in Nigeria. While there are problems confronting these institutions in their efforts to use hybrid library services and these problems are lack of skills of users, lack of training and development of service staff, attitude of staff, authority and authentication of information sources, erratic power supply and high cost of procuring equipment. However, the solutions to these problems have been suggested to be the use of user education/orientation programme, training and education of library staff, necessary funding, regular power supply, effective preservation of digital medium and closer integration among information providers in order to reduce costs.
REFERENCES


Igwebuik, E.U. (2007). Information and communication technology (ICT) application to library services in ECOWAS library Abuja: a case study: An unpolished B.Sc project University of Nigeria, Nsukka


**APPENDIX I**

**TABLE 1:** Population of University Librarians in Federal Universities of North-Central Zone of Nigeria.

<table>
<thead>
<tr>
<th>S/NO</th>
<th>UNIVERSITY LIBRARIES</th>
<th>POPULATION OF LIBRARIANS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>University of Abuja FCT</td>
<td>14</td>
</tr>
<tr>
<td>2</td>
<td>Federal University of Technology, Minna, Niger State</td>
<td>25</td>
</tr>
<tr>
<td>3</td>
<td>University of Ilorin, Kwara State</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>University of Jos, Plateau State</td>
<td>21</td>
</tr>
<tr>
<td>5</td>
<td>Federal University of Agriculture, Makurdi, Benue State</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>102</strong></td>
</tr>
</tbody>
</table>

Source: Nominal roll of librarians in each of the five Federal Universities for 2009/2010

**TABLE 2:** Population of users (lecturers) of libraries in the Federal Universities of North-central Zone of Nigeria.

<table>
<thead>
<tr>
<th>S/NO</th>
<th>UNIVERSITY LIBRARIES</th>
<th>POPULATION OF LECTURERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>University of Abuja FCT</td>
<td>230</td>
</tr>
<tr>
<td>2</td>
<td>Federal University of Technology, Minna, Niger State</td>
<td>400</td>
</tr>
<tr>
<td>3</td>
<td>University of Ilorin, Kwara State</td>
<td>500</td>
</tr>
<tr>
<td>4</td>
<td>University of Jos, Plateau State</td>
<td>450</td>
</tr>
<tr>
<td>5</td>
<td>Federal University of Agriculture, Makurdi, Benue State</td>
<td>219</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>1,799</strong></td>
</tr>
</tbody>
</table>

Source: Library users registration list for each of the five Federal Universities of the North-central Zone of Nigeria for 2010 academic session.
TABLE 3: Population of users (students) of libraries in Federal Universities of North Central Zone of Nigeria, for 2010 academic session.

<table>
<thead>
<tr>
<th>S/NO</th>
<th>UNIVERSITY LIBRARIES</th>
<th>POPULATION OF STUDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>University of Abuja FCT</td>
<td>6,006</td>
</tr>
<tr>
<td>2.</td>
<td>Federal University of Technology, Minna, Niger State</td>
<td>4,800</td>
</tr>
<tr>
<td>3.</td>
<td>University of Ilorin, Kwara State</td>
<td>5,200</td>
</tr>
<tr>
<td>4.</td>
<td>University of Jos, Plateau State</td>
<td>5,500</td>
</tr>
<tr>
<td>5.</td>
<td>Federal University of Agriculture, Makurdi, Benue State</td>
<td>1,500</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>23,006</td>
</tr>
</tbody>
</table>

Source: Library users (students) registration list for each of the five Federal Universities for 2010 academic session.
APPENDIX II

Establishment Of Hybrid Library Services Questionnaire (EHLSQ)

For University Librarians

Department of Library and Information Science,
University of Nigeria,
Nsukka.
25th June, 2011.

Dear Respondent,

ESTABLISHMENT OF HYBRID LIBRARY SERVICES

QUESTIONNAIRE (EHLSQ)

I am a Postgraduate student of the above Department and currently carrying out a research project on the topic: Establishment of Hybrid Library Services in Federal Universities of the North Central Geo-political Zone of Nigeria.

The study is geared towards finding out the issues involved in establishing a hybrid library service in University libraries of the Federal Universities of the North Central Zone of Nigeria, in order to enhance efficiency in teaching and learning. Findings will go a long way to improve the overall services in our university libraries.

Your efforts therefore, at answering, the attached questionnaire as honestly and clearly as you can, will be highly appreciated by the researcher. You are equally assured of the confidentiality of your responses as such will be used for this study alone.

Thanks for your cooperation.

Yours faithfully,

(Sgn)

Tunde Stephen Seidu
ESTABLISHMENT OF HYBRID LIBRARY SERVICES

QUESTIONNAIRE (EHLSQ)

FOR UNIVERSITY LIBRARIANS.

Instruction: You are please, required to tick (✓) where appropriate: Equally fill in the blank spaces where necessary.

Section A;

1. Name of University Library _________________________________

2. How long have you worked as a librarian in the university library?
   (a) 0 – 5 years (      )
   (b) 6 – 10 years (      )
   (c) 11 – 15 years (      )
   (d) 16 years and above (      )

Section B:

3. Are you satisfied with the operation of traditional library service in your library?
   (a) Yes (      )    (b) No (      )

4. If you are satisfied, what other areas of traditional library service do you require improvement?
   (a) Borrowing system (      )
   (b) Staff prompt response to users information needs (      )
   (c) Inadequate facilities (      )
   (d) Shelving system (      )
   (e) Catalogue system (      )
   (f) Referral services (      )
   (g) Non-compilation of bibliographies (      )
   (h) Indexing and abstracting (      )
(i) Any other (please specify) (   )

5. If No, which of these shortcomings is associated with the operations of traditional library service in your library?

(a) Information retrieval is slow (   )
(b) Information resources are not current and up to date (   )
(c) Inability to cope with global large volume of information resources (   )
(d) Poor organization of resources (   )
(e) Poor attitude of staff to work (   )
(f) Increase in cost of procuring modern information resources (   )
(g) Any other (please specify) ……………………………………………………

6. In view of these shortcomings would you consider the idea of combining traditional library service with use of modern resources?

(a) Yes (   ) (b) No (   )

7. Which of these hybrid library services do you have in your library?

(a) e-journal (   )
(b) e-books (   )
(c) audio-visuals (   )
(d) on-line database (   )
(e) e-indexing and abstracting (   )
(f) CD ROMs (   )
(g) E-thesis and dissertations (   )
(h) E-references (   )
(i) Computer files (   )
(j) Any other (-please specify)……………………………………..

8. Which of these do you consider as benefits of modern information resources?
(a) Convenience of time and space (    )
(b) Faster and up-to-date dissemination of information (    )
(c) Cost effectiveness (    )
(d) Multiple access to users (    )
(e) Round the clock availability of information (    )
(f) Information retrieval is fast (    )
(g) Requires less space to operate service (    )
(h) Any other (please specify) ..............................................

9. Do you have a hybrid service in your university library?
   (a) Yes (    )  (b) No (    )

10. To what extent is hybrid library service in operation in your library?
    (a) Very high extent (    )
    (b) High extent (    )
    (c) Low extent (    )
    (d) Very low extent (    )

11. Hybrid library services is necessary in university libraries because of the
    following reasons:
    (a) Access to digital copies of physical information resources (    )
    (b) Access to books and other physical information resources (    )
    (c) Access to information resources fully available on the internet (    )
    (d) Integration of traditional and modern information resources simultaneously
        (    )
    (e) Bridging the gap between the traditional library and recipient modern
        information resources (    )
(f) Presentation of heterogeneous information services to users via a single interface (    )

(g) Any other (please specify).........................................................

12. Which of these processes do you currently utilize to create awareness of existing integration of library services in your library?

(a) Current awareness service (    )

(b) Informing the deans and heads of departments in writing (    )

(c) Displays on notice board (    )

(d) Through exhibitions (    )

(e) Announcements in library related periodicals (    )

(f) Any other (please specify).........................................................

13. To what extent is hybrid library service effective in your university library?

(a) Very high extent (    )

(b) High extent (    )

(c) Low extent (    )

(d) Very low extent (    )

14. Which of these aspects of hybrid library services are you properly trained to handle?

(a) Traditional library service (    )

(b) Modern information resources/service (    )

(c) Both A and B (    )

(d) Any other (please specify).........................................................

15. What are the problems faced in operation of hybrid library service in your library?

(a) Necessary skills for librarians (    )

(b) Training and development of service staff (    )
(c) Absence of closer integration involving stakeholders (  )

(d) Inter-operability of the search system (  )

(e) Preservation of the digital medium of the hybrid library service (  )

(f) Attitude of staff to hybrid library service (  )

(g) Problems of integration of resources (  )

(h) Authority of information sources (  )

(i) Erratic power supply (  )

(j) High cost of purchasing equipments (  )

(k) Incompatibility in the activities of different governing bodies operating hybrid service (  )

(l) Any other (please specify)………………………………………………

16. How many hours of the working days, is the hybrid library service made available for use?

(a) 2-3 hours (  )

(b) 4- 6 hours (  )

(c) 7- 8 hours (  )

(d) 10- 12 hours (  )

(e) 12 hours above (  )

17. Which of the following do you consider necessary to employ in solving the problems of establishing hybrid service in your library?

(a) User education/ orientation programmes (  )

(b) Training and education of library service staff (  )

(c) Proper integration of information resources (  )

(d) Interaction among information providers which reduces cost (  )

(e) Necessary funding (  )
(f) Provision of regular supply of power ( )

(g) Preservation of the digital medium ( )

(h) Any other (please specify) .................................................................
APPENDIX III
ESTABLISHMENT OF HYBRID LIBRARY SERVICES
QUESTIONNAIRE (EHLSQ)
FOR USERS (STUDENTS ONLY)

Department of Library and Information Science,
University of Nigeria,
Nsukka.

25th June, 2011.

Dear Respondent,

ESTABLISHMENT OF HYBRID LIBRARY SERVICES
QUESTIONNAIRE (EHLSQ)

I am a Post-graduate student of the above department and currently carrying out a research project on the topic: Establishment of Hybrid Library Services in Federal Universities of the North-central Zone of Nigeria.

The study is geared towards finding out the issues involved in establishing a hybrid library service in university libraries of the Federal Universities of the North-central Zone of Nigeria; In order to enhance efficiency in teaching and learning findings will go a long way to improve the overall services in our University libraries.

Your effort therefore at answering the attached questionnaires as honesty and clearly as you can, will be highly appreciated by the researcher.

You are equally assured of the confidentiality of your responses as such will be used for this study alone.

Thanks for your co-operation

Yours Faithfully,
Sgn
Tunde Stephen Seidu
ESTABLISHMENT OF HYBRID LIBRARY SERVICES

QUESTIONNAIRE (EHLSQ) FOR USERS

(STUDENTS ONLY)

**Instruction:** You are please required to tick ( ) where appropriate. Equally fill in the blank spaces where necessary.

**SECTION A:**

1. Name of University library …………………………………………………

2. What is your Faculty/ Department?:………………………………………

3. What is your level of study presently? ……………………………………

**Section B:**

4. Are you satisfied with the operation of traditional library service in your library?
   (a) yes ( )  (b) No ( )

5. If you are satisfied, what other areas of traditional library service do you require improvement?
   (a) Borrowing system ( )
   (b) staff response to users information needs ( )
   (c) Shelving system ( )
   (d) Catalogue system ( )
   (e) Referral services ( )
   (f) Inadequate facilities ( )
   (g) Non-compilation of bibliographies ( )
   (h) Indexing and abstracting service ( )
   (i) Any other (Please specify)………………………………………...
6. Which of these shortcomings is associated with the operations of traditional library service?

(a) Information retrieval is slow (    )

(b) Information resources are not current and up-to-date (    )

(c) Inability to cope with global large volume of information resources (    )

(d) Poor organization of resources (    )

(e) Poor attitude of staff to work (    )

(f) Increase in cost of procuring books and other materials (    )

(g) Any other (Please Specify)…………………………………………..

7. In view of these shortcomings, would you consider the idea of combining traditional library service with modern information resources.

(a) Yes (    )

(b) No (    )

(c) Indifferent (    )

(d) Any other (Please specify) ………………

8. If Yes, what do you think are the advantages of Integrating the traditional and modern information.

(a) access to books and other physical information resources (    )

(b) Access to information resources fully available on the internet (    )

(c) Access to digital copies of physical information resources (    )

(d) Presentation of heterogeneous information service to users via a single interface (    )

(e) Integration of traditional and modern information resources (    )

(f) Bridging the gap between the traditional library and the incipient modern information resources. (    )

(g) Any other (Please specify) ……………………………….
9. Which of these services are existing in the library?
   (a) Internet services  
   (b) On-line websites  
   (c) Audio–visuals  
   (d) Computer files  
   (e) CD ROMs  
   (f) On-line databases  
   (g) Any other (Please specify) .............................................

10. Is hybrid library service existing in this library?
    (a) Yes ( )  (b) No ( )

11. If Yes, how would you assess the current stage of development of hybrid library service in this library?
    (a) Just starting  
    (b) Early stage  
    (c) Mid-level stage  
    (d) Advanced stage  
    (e) Any other (Please specify) .............................................

12. How would you describe your attitude towards the hybrid library service in your library?
    (a) Enthusiasm  
    (b) Dislike  
    (c) Indifference  
    (d) Reluctance  
    (e) Any other (Please specify) .............................................
13. To what extent is hybrid library service effective in this library?

(a) Very high extent  (   )
(b) High extent  (   )
(c) Low extent  (   )
(d) Very low extent  (   )
Dear Respondent,

I am a post-graduate student of the above department and currently carrying out a research project on the topic: Establishment of Hybrid Library Services in Federal Universities of the North-Central Geo-political Zone of Nigeria.

The study is geared towards finding out the issues involved in establishing a hybrid library service in University libraries of the Federal Universities of the North-Central Zone of Nigeria: In order to enhance efficiency in teaching, learning and research. Findings will go a long way to improve the overall services in our university libraries. Your efforts therefore at answering the attached questionnaire as honestly and clearly as you can will be highly appreciated by the researcher.

You are equally assured of the confidentiality of your responses as such will be used for this study alone.

Thanks for your cooperation.

Yours faithfully,

Sgn

Tunde Stephen Seidu
ESTABLISHMENT OF HYBRID LIBRARY SERVICE

QUESTIONNAIRE (EHLSQ) FOR USERS.

(LECTURERS ONLY)

Instruction: You are please required to tick (      ) where appropriate. Equally, fill in the blank spaces where necessary.

Section A:

1. Name of University library …………………………………………………

2. What is your Faculty /Department ………………………………………….

Section B:

3. Are you satisfied with the operation of traditional library service in your library?
   (a) Yes (       )
   (b) (      )

4. If you are satisfied what other areas of traditional library service do you require improvement?
   (a) Borrowing system (      )
   (b) Staff response to users Information needs (      )
   (c) Shelving system (      )
   (d) Catalogue system (      )
   (e) Referral services (      )
   (f) Inadequate facilities (      )
   (g) Non-compilation of bibliographies (      )
   (h) Indexing and abstracting service (      )
   (i) Any other (Please specify)……………………………………….
5. Which of these shortcomings is associated with the operations of traditional library service?

(a) Information retrieval is slow (   )

(b) Information resources are not current and up-to-date (   )

(c) Inability to cope with global large volume of information resources (   )

(d) Poor organization of resources (   )

(e) Poor attitude of staff to work (   )

(f) Increase in cost of procuring books and other materials (   )

(g) Any other (Please specify) …………………………………………

6. In view of these shortcomings, would you consider the idea of combining traditional library service with modern information resources?

(a) Yes ( ) (b) No ( ) (c) Indifferent ( )

(d) Any other (Please specify)………………………………………

7. If Yes, what do you think are the advantages of integration of traditional and modern information resources in this library?

(a) Access to books and other physical information resources (   )

(b) Access to information resources fully available on the internet (   )

(c) Presentation of heterogeneous information services to users via a single interface (   )

(d) Integration of traditional and modern information resources (   )

(e) Bridging the gap between the traditional library and the incipient modern information resources (   )

(f) Any other (Please specify) …………………………………………
8. Which of these services are existing in the library?
   
   (a) Internet services ( )
   (b) On-line websites ( )
   (c) Audio-visuals ( )
   (d) Computer files ( )
   (e) CD ROMs ( )
   (f) On-line databases ( )
   (g) Any other (Please specify)……………………………………..

9. Is hybrid library service existing in this library ?
   
   (a) Yes ( )  (b) No ( )

10. If yes, how would you assess the current stage of development of hybrid library service in this library?
    
   (a) Just starting ( )
   (b) Early stage ( )
   (c) Mid-level stage ( )
   (d) Advanced stage ( )
   (e) Any other (Please specify)……………………………………..

11. How would you describe your attitude towards the hybrid library service in your library?
    
   (a) Enthusiasm ( )
   (b) Dislike ( )
   (c) Indifference ( )
   (d) Reluctance ( )
   (e) Any other (Please specify)……………………………………..
12. To what extent is hybrid library service effective in this library?

(a) Very high extent (   )

(b) High extent (   )

(c) Low extent (   )

(d) Very low extent (   )