

MANAGEMENT AND USE OF HYBRID LIBRARY SERVICES: PROBLEMS AND PROSPECTS

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Abstract

Hybrid libraries are increasingly being recognized as efficient channels for the collection, processing, storage, retrieval and dissemination of information in response to the global information exchange and for wide outreach. They are libraries that work both in the electronic or digital and print environment, a transitional state between print and digital environment. This paper explains the growing trends in new ways for accessing information from the emergent and explosion of Information and Communication Technologies. It discusses the concept of hybrid libraries, its development, management, services, problems and recommendations for making hybrid library services available and more efficient for the clientele.

Keywords/ *Hybrid libraries, Library services, Management and Use*

Introduction

The introduction of information and communication technologies in libraries during the last quarter of the 20th century has changed the concept of library and the library profession.

Information seekers are no longer confined to the walls of the library, (Kwak, *et al.* 2002; Bevis, 2003; Rosenberg, 2005; Vinitha, 2006). According to Kwak, *era/*. (2002), majority of the libraries in the developed countries like the U.S. and U.K. are now using hybrid libraries, depending on both electronic and print media based on network and physical facilities, while developing countries such as Nigeria, have a lot of challenges that are not allowing them to benefit much from the provisions of the new information communication technology.

However, the new information environment requires that appropriate technologies be applied in the provision of information. Creating hybrid libraries is a starting point in

curbing the digital divide which already exist between the developed and the developing countries of the world.

Many libraries in some developing countries are involved in wide area networks, with Internet access (Martey, 2004; Rosenberg, 2005). Patrons are no longer confined to their own library holdings. Using networked technologies, patrons can get the information required electronically from wherever it is located on the web. The main role of a librarian is now to assist end-users in searching techniques and the use of technologies. Unlike in the traditional library where users require the card catalogue ability to access a book, in an e-library services environment, users require adopting ICT and having basic information - searching skills.

It is vitally important that libraries, as information providers, meet the new expectations to adapt and engage with the new information retrieval practices of library users. One way that libraries can respond is to capitalize on the availability and instant connectivity of mobile devices to link the virtual and the physical library. As library users become increasingly dependent on electronic access, librarians have to work harder to enhance their virtual presence with services such as instant messaging, with learning tools such as online research guides, and with research resources such as electronic databases. While these services are indeed valuable, the physical library remains an essential factor in supporting the research and learning needs of users. Librarians exhibit commitment to the physical space through the renewed emphasis on the library as a place in the development of learning (Erkan: 2011). However, rather than approaching the virtual and physical library as distinct efforts, greater service enhancement might be achieved by building a bridge between the virtual and physical library for users.

Traditionally libraries have focused on organization and management of print collections and documentation of latest primary sources of printed information. Present day information environment also demands for seamless integration between information users and information sources, cross-disciplinary communication of information in the interest of cross fertilization of ideas and agile and flexible library and information system that is capable of quickly and comprehensively satisfying users' information needs. This kind of environment requires removal of all barriers and bottle necks that hinder the flow of information so that intellectual assets are properly managed for sustaining a competitive position for the organization.

Large scale digitization, production of electronic information resources, unbundling of information and availability of information in the open source domain have given birth to a variety of aggregator services and information access tools e.g. J-Gates, Ingeta.com. A variety of information products in the commercial and non-commercial sector are emerging e.g. MD consult, SKOLAR MD, OCLC'S First Search, Cockrane Library Review, LEXIS NEXIS, IBID, West Law etc. A variety of new generation

information tools are also emerging that help in content creation, content extraction, content management and retrieval .e.g. Ulrich Serials Analysis System is a suitable tool to analyze and rationalize serial collections. Ficstarweb grabber helps to extract data from Google, Yahoo, Amazon.com, Monstor.com, e-commerce sites and all kinds of member lists. Baruchson (2002) reported headline-grabbing devices that help to track and control global news sources. Several other information products and knowledge management tools are being developed e.g. PubMed and Biomed.

Nigerian libraries and information centers in fact, require transforming themselves from information processing and administrative units to more effective service providers and institutions that provide outreach service to meet vital information needs of the society. They can help to convert the human beings to human resources and be more innovative in their work by providing relevant information. In the existing landscape of work, merely doing a job well is not enough. Constantly finding ways through work being handled to build a better world is important and elevating, and enriching the lives of those who come in contact is essential. Access to right information and opportunities can help the people to become what they are capable of becoming. Nigeria is yet to have a vibrant library and information system for organized control and distribution of information for meeting the needs of everyone in the society. In addition to many other factors, one of the important reasons for this situation is lack of preparation for developing library and information manpower in tune to the present turbulent times. Despite the fact that modern technologies have been introduced in libraries and the emerging of technology acceptance, this paper is to sensitize developing countries libraries, Nigeria in particular, on the need to provide hybrid information services to enhance their research and development.

Concept of the hybrid library

The term "hybrid" is often used in the description of activities or services that combine two established features. A simple way of defining the hybrid library is that it is a means of integrating the traditional library with the digital library. However, the digital library elements are meant to support, rather than replace, conventional libraries. The contemporary information user now has to operate in a hybrid environment where electronic and paper-based sources are used alongside each other. The digital library is more than the mere existence of electronic sources of information, such as CD-ROMs and online databases. Some researchers would consider a library with these resources to be an electronic library and that the electronic library should not be confused with the digital library, since telecommunication is an added precondition for the digital library. One of the key points to the digital library is that the information accessed can be remote from the point of access in multiple locations. This means that the place where that access takes place need not be the traditional library building: it could be a workstation situated outside the library.

There are many definitions given to hybrid library. 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. (Dempsey et al 2004). 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. Fadehan and Okeke-John (2009) has highlighted a number of issues to be addressed to ensure the effective transition to hybrid library service. According to them, 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 with moves to provide more tolerable products, information users must be assisted to develop new approaches to seeking and using information sources.

Rosenberg (2005) 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. To fully exploit the opportunities that are offered by the materials that are in digital formats, there is, in reality, a very strong continuity between traditional library roles and missions and the objectives of digital library systems. This thinking is based on the belief that the needs of serious information seekers can only be met by providing the user with access to both electronic and traditional information ^sources. Any modern quality library service must endeavour to provide ready access to both types of resource. Furthermore, it should provide such access in an integrated fashion. Its search pathways should present to the user a combination of relevant electronic and traditional resources in response to searches based on author, title, subject, etc. Its browse pathways should similarly lead the user to both categories of resources.

The UK e -Lib Electronic Libraries Program (2010) has coined the term "hybrid library" to cover services that unite the functions of the traditional library with those of electronic, digital or virtual library services: A hybrid library is envisaged as the bringing together technologies from electronic, digital or virtual library projects which have been taking place round the world as well as in the UK's e-Lib programme, plus the electronic products and services already in libraries, and the historical functions of local and physical libraries. Recently, the eLib program, has extended the hybrid library concept beyond the library domain, coining the phrase "hybrid information

environment" Russell et al (2013) described hybrid information environment as one where an appropriate range of heterogeneous information services is presented to the user in a consistent and integrated way via a single interface. It may include local and/or remote distributed services, both print and electronic. The environment will provide some or all of the following functions: discovery, location, request, delivery and use, regardless of the domain in which objects are held. Domains may include e.g. libraries, archives, museums, government. There may be dynamic configuration to reflect an individual user's interests (or a group's interests). The environment will depend on open systems and standard protocols. In a nutshell, a hybrid library deals primarily with physical data while a digital primarily deals with digital data. Nevertheless, most modern libraries deal with both. They are both based within the physical but operates two services the physical and the digital and the Web being the environment of service and access to information. Today's modern library is not traditional anymore but a transitional institution that rapidly merge new with old. The services are performed on the web where the users are. Web-based resources and services allow users to take their search further than they might be able to with printed -based resources. This is because Web - based information system provides access to both electronic information which the library subscribes to single handedly or in consortia arrangement, with a host of other information resources which allow researchers to do their research conveniently without visiting the library. Moreover, they can be sure that the materials they wish to use are available in the library before visiting the library for resources that are only in print format.

Historical Development of Hybrid Library

The hybrid library development project started in the United States of America in 1998 and further to the United Kingdom. It first started as e-Lib Programme which aimed at investigating the issues of digital library implementation and integration in the developed world. Dowler (2007) reported that the Electronic Libraries(e-Lib) Programme which was an off-shoot of the United States Digital Libraries Initiative (USDLI) was established and funded by the USA Federal Government under the umbrella of the National Science Foundation (NSF); the Defense Advanced Research Project Agency (DARPA); and the National Aeronautics and Space Administration (NASA). Though these funding agencies were mostly concerned with computer science research, the subject areas were concentrated in e-Lib. The decision was about how best to renovate the existing practice and make it work better, perfect and efficient. However, Sloan (2006) remarked that the e-Lib Programme has been characterized by the UK Government as "development-based" rather than research. According to him, the Joint Information Systems Committee (JISC) became the parent organization of e-lib in 1997 and has since then, been stimulating, and enabling the cost effective exploitation of information systems and has also provided a high quality national network infrastructure for the UK higher education and research councils communities. In effect, JISC has funded a great number of development programmes aimed at supporting universities by piloting the use of appropriate new technologies in computer and information related

environments. The UK and USA e-lib programmes have given birth to the numerous existing Digital libraries around the world today and which has necessitated many libraries to either convert their holdings or integrate their earlier traditional manual systems with the new electronic digital format. In Africa, and particularly Nigeria, the hybrid library development has been hazy, though ongoing. The initiative of the National Universities Network (NUnet), a brain child of the National Universities Commission (NUC) in 1985 and which was launched in 1997 heralded the era of internet library connectivity in Nigerian University Libraries. According to Ogbonna and Nwosu (2007), the United Nations Development Programmes (UNDPs' internet initiative to Africa in 2002 provided an access to twelve countries in sub-Saharan Africa, to which Nigeria was involved. According to them, there was also a Regional Informatics Network for Africa (RINAF) established by the United Nations (UN) in Obafemi Awolowo University, Ile-Ife in 2002. After these initial establishments, the University of Ibadan, University of Lagos, University of Nigeria, Nnamdi Azikiwe University and a host of other Federal and State Universities discovered the need to provide internet facilities and programmes into their library systems. It was therefore, the establishment of the internet connectivity to these libraries that provided the impetus to harmonize what existed originally with the new ones, in order to provide alternative resources for the varying categories of users.

The 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 programmes. 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. Some private university libraries in Nigeria have started integrating their information resources into hybrid services. These include; Babcock University, Covenant University, Redeemer's University etc. Sixty percent of the Covenant University library's resources have been digitized and its physical resources are accessible to users that have access to the library anywhere on the globe. Oil companies and other organisations have made attempts to establish hybrid libraries in Nigeria, for example Texaco donated a hybrid libraries to riverine schools in Ondo State, (Vanguard, 2015) Chevron connected Edo rural schools to internet with hybrid library. The Economic and Financial Crime Commission (EFCC) started its hybrid library project in 2012 and it is in progress.

Management of Hybrid Libraries

Hybrid libraries are more than an interface, offering integrated discovery of resources, whether they are in analog or digital format, whether they are local, national or international. Johnson (2001) pointed out that the hybrid library is seen as an environment with physical and virtual services that supports the activities of the users. As a result, successful hybrid libraries implementation must involve closer

integration among the stakeholders such as the library staff, computer analysts, academic staff and educational development staff.

Other management aspects of hybrid libraries that needed to be considered include the training and development of service staff in order to achieve an appropriate skill, support and instruction for users, team-working and the management of change. Ultimately, these issues must be addressed strategically, as the hybrid library promises to become a central element of teaching, learning and research activities. Apart from the technical challenges that hybridization may offer, there are many management and organizational issues that are faced within institutions establishing this system. One of them is user-authentication, integration, interoperability and database and digitalization management.

User-authentication has been a predominant issue in hybrid library management, since the system must store information about the users and their personal preferences as well as details of resources they have to access by virtue of their membership of a given academic community. Authentication, as defined by Lynch (2002), established the identity of a user within a given context, its computerized processes, authorization, and the levels of controlled access to resources for the user identity.

Authentication therefore, plays a key dual role, firstly in securing personal data privacy, and secondly in controlling which resources may be used. Networked operating systems inherently, provide this degree of administrative control. However, their locus of influence is confined to the organizations that deploy them. Pitifully, problems usually inevitably arise as users attempt to move between resources where different access restrictions apply. Traditional techniques of access control employing user identifier and password combinations are becoming unsustainable due to their high administrative overhead and practical shortcomings.

The "password" proliferation scenario that is familiar to librarians, information managers, IT personnel and computer users themselves are symptomatic of this problem. Of-course, these issues when properly addressed would make for a better management of hybrid library system.

Integration in hybrid library management is web-focused. The web is seen as the best environment to achieve integration of different services. As Dempsey, et al (2004) observed, the web already provides a transfer presentation layer, through which many different resources can be accessed. Dempsey further remarks that naturally, the organization's resources are usually very shallow, and so, may be unified at the presentation layer by being linked to the same web. In contrast, seamless integration can only be achieved where services can be accessed through a single user-interface and with a single authentication gateway. If this level of

integration is to be achieved, various technologies and processes need to be implemented for easy and better management.

On the issue of interoperability, it can be said without equivocation that the existing hybrid libraries, both local and international, own and subscribe to a range of resources and services which are supplied in a variety of formats and media—print monographs and serials, electronic journals, abstract and indexing services on CDROMs, etc. Most of these electronic resources are accessed through remote servers.

However, there, is no uniform way of managing and providing integrated access to these hybrid resources, as a result of this, users are forced to interact with each service individually and by so doing, waste time in repeating the same steps to search different systems. One possible solution should be to ensure that all the services providers conform to one model profile. In practice, this may perhaps, be unrealistic given the spread of services currently in existence and those that will be involved in the future.

Use of Hybrid Library Services

The content of interest to those who use libraries is highly distributed across the web. Vast changes have occurred not only in the amount of information available but also where people prefer to look for what they need. Library collections exist alongside many other choices for information seekers, including those for whom hybrid library collections are or would be useful.

Many factors promote or hinder the adoption and usage of hybrid library, these include: benefits/usefulness: (Bar-Ilan, Peritz & Wolman 2003; Baruchson-Arbib & Shor 2002; Marchonini 2000; Theng, et al. 2007 & Thong, Hong & Tam, 2002 & 2004); awareness, (Bar-Han, Peritz & Wolman 2003; Bishop, 2002; Nicholson 2004 and others); relevance, (Kwak et al. 2002; Nicholson 2004; Vaidyanathan, et al. 2005, and Nov & Ye 2008) among others and ease of use, (Lagiers 2002 and Nov. & Ye 2008) and many others.

Usability refers to how well the system can be used without one having problems. Value of works refers to the value/benefits that the material has to the user, which is largely influenced by the relevance of the work, and is linked to the introduced independent variable of relevance where an information seeker puts in a query, the system searches through to answer the query. If hybrid library services are relevant or valuable to the information seeker, the query will be answered accordingly. Nicholson (2004) therefore viewed users' use of library services as being affected by their awareness and by the relevance to them of the library's offerings. The two factors are further stressed by Vaidyanathan, *et al.* (2005), who studied digital library system components' acceptability. The two concepts of relevance and awareness

are introduced in the research model's variables to make the model appropriate to hybrid library services.

Users vary enormously and they will still vary in the use of hybrid library services. (Beagle, 2015). Tine hybrid library projects are trying to rectify this situation by pointing users back to the traditional resources and making resources available to users regardless of their format. Drawing on Beagle's theory called strategic alignment to his conceptual model, there is support for a "continuum of service" in the digital or hybrid library. Strategic alignment is the alignment of organizational elements, such as personnel, operations and its unique range of services, with its institutional environment, and, as the information environment is increasingly digital, that includes integration with technology, and staff competencies in using IT tools to provide customer service. Thus, the library is able to realign itself with the "rapidly evolving digital environment."

The continuum of service that Beagle envisions as the key feature of information commons includes not only the identification and retrieval of information (reference) but the manipulation and repackaging of that information into a final, presentable product. This continuum correlates to the hybrid library model. Manipulation and repackaging of information, which falls under the purview of media services, could occur not only in the information commons but through a form of technological outreach to faculty offices and student spaces in academic departments. Thus, this model incorporates technology teams that reach out to their patrons as well as an information center that provides computer networks and maintains the vital "library as place," as care must be taken not to alienate those patrons who seek a traditional library experience, according to Halbert (2014).

Another area that hybrid library is found to be useful is in the field of librarianship which is a relatively new service model, where individual librarians are deployed "in the field"—in the colleges or departments where the students and faculty are located. Virginia Tech University is the pioneer in the field of librarianship. This program is considered more user-centered than the typical liaison program. The program also combines high-tech with high-touch, as librarians offer technical as well as traditional reference assistance. In fact, librarians play multiple roles in this type of environment. Other universities in the United States of America (USA) have adopted similar field librarian programs, such as the University of Southern California and University of Michigan. Of particular note is the University of Michigan's program, which merges subject knowledge, technology and library expertise in the form of librarians who are deployed in specific schools. Similarly, In Nigeria, the Covenant University started the field librarianship in 2014 by deploying some librarians to some neighbouring Secondary schools to render reference services. Disadvantages of these programs include conflicting loyalties and identities, which can be addressed by cultural assessment and excessive time commitments required by librarians. Walton and Edwards (2016) explained that the hybrid library represents discovery

learning—it is a teaching and learning tool requiring skills that are closer to library science than traditional faculty instruction; therefore, a liaison role between academic and library staff is not only appropriate, but warranted, as teaching staff also need to develop information technology skills.

Problems of Hybrid Library Services in Nigeria

Hybrid library has apparently created changes in the overall process of information management, ranging from selection, acquisition, organization and preservation to availability and access. It has created an easy gateway to information procurement and dissemination. In developed nations of the world, it has created a shift from the traditional set-up to an electronic mix of known and reliable resources. In Nigeria, like other developing nations, the potential areas of problems include:

- the hard ware/software issues
- inadequate support staff, such as programmers, software analysts and computer engineers
- poor bandwidth for reasonable coverage
- copyright issues
- user authentication
- lack of computer education
- poorly developed power system and
- poor telecommunications infrastructure

On the over-all analysis, today's hybrid library set-up is represented by a patch work of technologies, each having different strengths and none completely adequate. It is therefore, envisaged that with the nation's continued growth and investment in technologies, including her partnership with other developed countries, there is hope of light in the tunnel. That in the very near future Nigerian academic and even public libraries will be turned into hybrid libraries.

Recommendations

The hybrid library system is plagued with some identified obstacles and the greatest being inadequate skills followed by funding. In order to build a viable hybrid library in Nigeria, a local hybrid library system is needed to integrate all the established libraries in the country. Each academic and research institution needs to maintain an institutional repository which represents a scholarly communication model where researchers are mandated to submit their research/seminar papers in an electronic format which will later be uploaded to their websites and then be made accessible to researchers in the country. Effort- towards digitization should be made. Government funding like: the US Digital Libraries Initiatives (DLI), funded by three agencies of the USA Federal Government - the National Science Foundation, the Defense Advanced Research Projects Agency, and the National Aeronautics and space Administration, (NSF/DARPA/NASA) and the UK Electronic Libraries Program (eLib) by JISC are highly desirable. Partnership with corporate organizations like MTN Connect - which

is currently supporting universities in Nigeria, should also be sought for. In addition, the formation of consortia amongst libraries of similar interests is highly needed. Lack of skills in managing web access has been shown to be the greatest impediment to providing hybrid services, it therefore follows that librarians require consistent training to equip them with the skills that are needed. Also, a lot of collaborations with IT staff and academics in the various institutions should be encouraged. At this juncture, the government remains the largest stakeholder in educational funding needs to reappraise its commitment towards a better funding of institutions libraries, while the institutions should look inwards for other funding avenues to supplement government activities.

Conclusion

The hybrid libraries are designed to use a range of technologies from different sources to explore integrated systems and services in both electronic and print environments. This means bringing the two worlds of library services in one place. Of-course, it further connotes that the Nigerian libraries are eagerly embracing the digital world. They are acquiring access to great quantities of electronic resources around the world, therefore, management of hybrid libraries for effective and efficient library services in Nigeria creating access to global knowledge in libraries. Though the issue of hybrid library development is still very new in Nigeria many academic libraries, especially at the tertiary levels are seen to have adopted it. Nevertheless, there are Still mounting problems., problems associated with our environment, but hope is very high that in the very near future, Nigeria will join the committee of Nations to fully enjoy and contribute their quota on the global access to knowledge through hybrid library services.

REFERENCES

- Baruchson-Arbib S. and F, Shor (2002). The Use of Electronic Information Sources by Israeli College Students. *The Journal of Academic Librarianship*, 28 (4) 255-257.
- Beagle, Jane (2015) Research Questions for the Digital Era *Library Trends*. Spring 636
- Bevis, D. M. & Graham, 1 B. (2000). The Evolution of an Integrated Electronic Journal Collection. *Journal of Academic Librarianship*, 29 (2) 115-119
- Bishop, A. P. (2002). Measuring Access, Use and Success in Digital Libraries. *Journal of Electronic Publishing*. Retrieved on 10 February 2016, from <http://www.press.umich.edu/jep/04-02/bishop.html>.
- Dempsey, Lorcan et al (2004). Managing access to a distributed library resources: report of the fifth models workshop. *Program*, 32 (3), 273- 274.

- Dowler, Lawrence (2007). Gateways to knowledge: the role of academic libraries in teaching, learning and research. Massachusetts: MTT Press.
- Erkan, K (2011). A distributed national electronic resource?; report of the fifth models workshop. *The Electronic Librarian*, 16(4), 231-137.
- E Lib Project Summary: Hybrid Libraries.(2010) Online Joint information Systems Committee (JISC). Available: <http://www.iisc.ac.uk/elib/projects.html> fht. 17 July. 2016.
- Fadehan, and Qkeke-John, Rita (2009) Library services in the hybrid environment: A case study of Research Institutes Lagos State, Nigeria. *Samara Journal of Information studies*, 9 (2)
- Halbert, U. V (2014) Management of hybrid libraries for effective services in Nigeria: New trends in accessing information. *Global Journal of academic Librarianship* 1.(1)1-7.
- Hong, W. Y., Thong, J. Y. L, Wong, W. M. & Tarn, K. Y. (2002). Determinants of user acceptance of digital libraries: An empirical examination of individual differences and system characteristics. *Journal of Management Information Systems*, 18 (3) 97-124.
- Johnson, M (2001). User authentication and authorization in the education sector in UK. <http://www.attens.uk.ac/ifo/authentication.Qhtml>.
- Kwak, B. H., Jun, Woodchun, Gruenwold, L. and Hong, Suk-Ki (2002). A Study on the Evaluation Model for University Libraries in Digital Environments. In: *Research and Advances Technology for Digital Technology. Proceedings of 6th European Conference, ECDLRome, Italy. Sept., 16 - 18*
- Laigers, H. (2002). The roles of Librarians in the 21st century .Accessed. <http://www.slidesshare.net/plaistr/the-role-of-librarians-inthe-21st-century>. Avail able on 3/7/2016
- Lynch, C.A. and Garcia-Molina, H. (2002) "Definitions and Roles of Digital Libraries." In: *Interoperability, Sealing, and the Digital Libraries Research Agenda: a report on the May 18-19, 1995 IITA Digital Libraries Workshop*. 22 August, 1995. Online. Stanford Digital Library Technologies. Available: <http://www.diglib.stanford.edu/diglib/pub/reports/digitalw/> August,2016.
- Marchonini, G. (2000). Evaluating Digital Libraries: A Longitudinal and Multifaceted View. *Library Trends*. 49 (20) 303-333.
- Martey, A. (2004). ICT in Distance Education in Ghana. *Library High Tech News*, 21 (5) 16-18.
- Nicholson, S. (2004). A Conceptual Framework for the Holistic Measurement and Cumulative Evaluation of Library Services *Journal of Documentation*, 60. 164

- Nov, B. & Ye, R. (2008). The Millennium Challenge - Towards the Hybrid Library. Downing Informatics presentation at an Aslib seminar, London,
- Ogbonna, A. & Nwosu, C (2007). Library of Congress Action Plan on Bibliographic Control of Web Resources: the Nigerian University Library experience. *Journal of Theoretical and Empirical Studies in Education*, 1(2) 140-146.
- Rosenberg, D. (2005). Towards the digital library: Findings of an investigation to establish the current status of university libraries in Africa. Retrieved on 21 May 2016 from: <http://www.inasp.info>.
- Russell, R., Gardner, T. and Miller, P. (2013). *MIA Requirements Analysis Study: Hybrid Information Environments - Overview and requirements*, Online. UKOLN. Available:<http://www.ukoln.ac.uk/dlis/models/requirements/overview/>.17 December 2015
- Sloan, V. (2006) Exploiting online potential information, national development and libraries. *IFLA Journal* 22 (4)
- Sutton, M. (1996). User Acceptance of Information Technology: Toward a Unified View, *MIS Quarterly*, 27 (3) 425-478.
- Theng, Y., Tan, K., Lim, E., Zhang, J., Goh, D. H., Ghatteja, K., Chang, C. H., Sun, A., Yu-Han, Dang, N. H., Li, Y. & Vo, M. Ch. (2007). Mobile G-Portal Supporting Collaborative Sharing and learning in Geography Reldwork; An Empirical Study. *Proceeding of JC DL 2007*, June 18-23, Vancouver, British Columbia, Canada.
- Vinitha, T. (2006). Digital environment, the challenges and opportunities. Pearl a *Journal of. Library and Information Science*
- Vaidyanathan, R. et al (2005) Applied technology: Innovations in Library services- 21^s century. Academic Library Communication contributed to Conference held in America, University of Puebla. Sept 4-6
- Vanguard (2015) Chevron connects Edo rural School to Internet with hybrid library. 3rd January.
- Walton, H and Edwards, Bold (2016) Digital preservation technologies and hybrid libraries. *Information services and use*. 22, 157-159.