

Expectations of Library Schools in the Preparation of Future Library Environment: Perspectives of African Countries

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Abstract

The paper focused on the expectations of library schools in the training and preparation of future librarians. The desk research and brainstorming with professional colleagues were combined as approach for eliciting the data for the study. The highlights of the paper include review of library and information science education, libraries and librarianship in developing countries; justification for preparing future librarians in developing countries for the digital environment, review of the status of library and information science education in selected countries. The various expectations of library schools in the digital environment identified includes inclusion of digital library courses in LIS education, restructuring and reviewing of courses offered in library schools, provision of functional and well-equipped practical laboratories and learning resources, intensive exchange programmes, recruitment of skilled and qualified staff in library schools and inclusion of stakeholders to harmonize curriculum used in training librarians in Africa. The challenges to preparation / training of future librarians were identified. The position of the paper is that library schools in developing countries should be repositioned to be able to produce graduates that are adequately equipped to function effectively in the digital environment.

Keywords: Developing Countries, Digital Environment Librarians, Library Schools, Training

1. Introduction

The environment of information services provision is changing as a result of the overwhelming influence of technologies. In contemporary environment, librarians are harnessing the potentials inherent in information and communication technologies (ICT) to provided information services to meet the varying needs of their client. As library schools churn out library graduates in masses, it is imperative that adequate consideration is given to the future library environment. The well known manual library practice is gradually giving way to digital library services. In the same vein, the preparation/training of analogue librarians should also give way to the training of digital librarians, who by their skills and expertise will occupy the central stage of library and information services. In as much as the penetration of ICTs to the library science domain is having domineering influences on the nature and mode of service offered to potential clients, it is also reshaping the types and nature of training given to librarians-in-training

Education for library and information science (LIS) professionals has taken a new turn in the face of far-reaching developments sparked off by the trend towards globalization (Nkanu, Iyishu & Ogar, 2013). Developments in library information science education would be irrelevant without adequate preparation of new generation of librarians to effectively use the new technologies in professional practices (Edegbo, 2011). Recognizing the forces and influence on the library profession, Mohammed (2008) suggest that librarianship, library systems, operation, services, as well as library education and training must be constantly transformed to cope with the dynamics of the 21st century model of librarianship and professionalism conceived to be open, user - centred, dynamic and receptive to constant change for the good of the server and the served (Mohammed, 2008).

The application of ICT in libraries has widened the scope of library and information science profession and confers new roles on libraries with the situation placing more demand on the ability of LIS professional in the information era (Nkanu, Hjjishu & Ogar, 2013). The success of library, archives and information centres in effectively meeting their obligation of information provision is hinged, in part on the development of skilled manpower (Abioye, 2013). No doubt, librarians for centuries have been acknowledged as custodians of information resources. They are seen as groups of persons charged with the responsibilities of keeping the information resources in such a way, that intending users can easily have access to such documents through the methods / techniques adopted by librarians to facilitate easy retrieval.

Libraries are in the midst of a phenomenal explosion of technological change that began during the 1990s (Chandler, 2001). This changes no doubt has a lot of implication for the practicing librarians and library educators in library schools. The traditional way of delivering library services is gradually giving way to modern ways. Innovations and creativity has become the order and hallmark of librarianship. However, to effectively address the wind of innovation and creativity, library educators are expected to re-adjust their trainings in line with the changes.

There is need for skills in managing web servers, web publishing, web access and information retrieval, conversion processes, database management systems and multimedia systems (Chiwere, 2007). As pointed out by Chisita & Mataranyika (2013), the ICT driven world provides the LIS schools with an opportunity to see clearly

beyond the current models and philosophies of education and training. According to Ekoja (2011:1), in the field of practice, the various library categories are implementing ICTs in their services and they are doing this through the establishment of e-libraries or computer laboratories with Internet connectivity where good numbers of computers are brought together to facilitate users' access to electronic resources. As operation of change due to advance technologically development and digitization initiative, librarians as information managers, professional and gatekeepers are also expected to be part and champions of this change (Ali, Yakub, Nweke & Makinttani, 2014). The libraries all over the world are now responding with adaptability, creativity and flexibility (Dasgupta, 2009). Michalis (2009) contends that if we are to survive as a profession and discipline, we should separate ourselves from other professionals that manage information.

LIS educational programs as noted by Michalis (2009), should aim at the creation of the "complete librarians", i.e. a person who can adequately understand and handle library materials and, also understand the managerial, institutional and social dimension of librarianship. To meet the information needs of this increasingly diverse society, all of our graduates need to be culturally competent from the moment they graduate (Jaeger, Bertot & Subramaniam, 2013). The education and training of librarians are addressed by LIS schools, on-the-job training and continuing education programmes (Fourie, 2004). Hashin and Mokhtar (2012:152) states that:

"There is no denying that this is a new global library environment and it is one in which librarians and information professionals are still finding their way. However, the foundations of the profession and the skills and roles associated with it will help to ensure librarians survival".

Technology demands high level of technical skill set from library professionals in order to make maximum use of new technological tools for providing effective and better service to the users (Khan & Bhatti, 2012). The terrain of library and information science profession has been changing dramatically as a result of the penetration of ICTs into the information industry. This, no doubt, has placed a demand on the present and future practitioners in the library profession.

LIS market according to Monica and Bii (2016) "require comprehensive knowledge and skills in areas such as information literacy, information and knowledge management, information technology, information searching and retrieval, research, communication skills, customer care, the ability to work both independently and in a team and positive work related attitudes". The adoption of a wide range of ICT calls for training that enables graduates to develop information system which help people to meet their information needs efficiently (Karvulya, 2007). Gojeh and Bayissa (2008:122) contend that:

Production of qualified librarians or information specialists with adequate theoretical knowledge and practical skills in application of modern information and communication technologies (ICTs) is found to be a strategic asset that will bring about significant development and changes in any nation's economy, politics, education, agriculture and other national sectors of the economy.

The field of librarianship has changed significantly as a result of technological changes and social developments, as well as other factors that had affected the provision of information and information use (Saad, Mohamad & Nadzar, 2012). In as much as ICTs has dramatically influenced every facets of information services provision, it is imperative to examine how library schools in African continents can reposition for effective information services delivery. It is against this backdrop that this paper aimed at x-raying the Expectations of Library Schools in the Preparation of Future Library Environment by drawing analogies from library schools in African Countries

2. Purpose of this paper

The cardinal purpose of this paper is to sensitize the community of library and information science practitioners on the need to prepare students in library schools to be able to fit into the future landscape of librarianship. The paper acknowledging the place of information services in today digital environment and that of tomorrow, also highlight on the expectations of library schools in preparing future librarians for the digital environment especially in developing countries.

3. The Nature of Contemporary and Future Library Environment

A clear understanding of today's library environment will position us to have a clear view of tomorrow's information environment. Hashrin & Mokhtar (2012:151) painted the picture of contemporary library and information science environment when they stated that:

"We live in an information society where the development of information technology and telecommunication networks is accompanied by a corresponding increase in knowledge, with a corresponding increase in knowledge. This new information environment requires new skills in

seeking, processing and using information . . . The role of librarians and information professionals in this new environment has been strongly influenced by these changes.

Abubakar, (2004) notes that, “today’s library and information science (LIS) educators are facing different challenges than their predecessors in the pre-internet era, in teaching tomorrow’s LIS professional. This is, because, over the last two decades, the LIS profession is facing unprecedented challenges due to advancements in ICTs. Witten (n.d.) observed thus:

The changing nature of the book may make it hard, or even impossible, for libraries to fulfill their mandate by providing quality information to readers, and the emergencies of a vast storehouse of information on the internet poses a different kind of conundrum. Librarians, the traditional gatekeepers of knowledge, are in danger of being bypassed, their skills ignored, their advice unsought, search engines send users straight to the information they require - or so users may think - - without any need for an intermediary to classify, catalogue, cross-reference, advise on sources.

Kamba, (2011:76) referring to the Nigerian scenario put it this way:

“The issue of the relationship between theory and practice in the field of library and information science need to be properly addressed in the curriculum of LIS schools in Nigeria”

The curriculum changes have resulted from the dispersion of technology throughout the profession and these trends include a focus on the user of information, in whatever context or setting, and on the diversity of information behaviours (Chandler, 2001). At this point, it is imperative to examine critical attributes of future libraries as this would help in establishing the skills and competency required of future librarians. According to Roberts (n.d.:3), he stated that:

There is a growing realization that physical libraries are becoming even more important community spaces, places, where people gather, share and learn from each other. Print collections will occupy less physical space but, if anything, libraries will find that the competing demands for both quiet study space and for noisy public space will mean that, if anything library buildings may need to become large and more flexible.

As noted by Sharma & Vishwanathan (2001), with the introduction of digital libraries, the library profession is changing, thus, librarians and their staff must prepare themselves for transformation from an era of scientific management to systems and structural management. In this digital age, library and information practitioners should be adequately positioned to effectively explore and maximize the new technologies to the benefits of linking the users to the right source of information. In the midst of technological changes, new skills are of high imperative to be able to meet the demands of digital users which are digital oriented. The implication is that the future library environment is hyper-competitive digital environment with high digital demands from the various stakeholders in the librarianship parlance.

4. Review of Library and Information Science Education, Library Science Curriculum and Librarianship in Developing Countries

Library and information science education is the study of organized collections of books and other non-book materials (Nkanu, Iyishu & Ogar, 2013). Library and information science (LIS) is concerned with the knowledge and skill by which the records of human communication are collected, organized and utilized (Edegbo, 2011). Library and information Science (LIS) education plays a significant role in the production of high quality LIS professionals who occupy a unique position in national development (Abioye, 2013). Library and information science program provides professional education for a wide variety of service and management careers in libraries, information enters (Gojeh & Bayissa, 2008). LIS schools in the words of Edzan and Abdullah (2003:12) noted that:

LIS schools have to prepare students for careers in all types of libraries and for information intensive jobs beyond libraries, including web publishing, information on brokering and marketing corporate information specialty and intranet management. If LIS schools continue to teach the basics while at the same time expand and upgrade their curriculum in line with the demands of ICT oriented environments, the new LIS graduates will enter the job market with ease.

Today’s library and information science (LIS) educators are facing different challenges than their predecessors in the pre-Internet era, in teaching tomorrow’s LIS professionals (Abubakar, 2014). The biggest challenge of LIS education and training today is how to make and sustain LIS education relevant and effective

(Jain & Jorosi, 2017). The purpose of library and information, education is to produce competent and capable professionals who are able to manage the libraries and library like institutions effectively and efficiently on scientific lines (Ganaie, 2012). As noted by Nzotta (1984), African, modern libraries and librarianship in developing countries are a twentieth century phenomenon. Jain and Jorosi (2017:42) referring to LIS education in Africa stated thus:

LIS education in African library and information science (LIS) schools is part of the global LIS education system and any changes, trends and challenges in the global LIS programme also influence LIS education in Africa. Over the past two decades there has been increased scholarly interest among LIS educators in African LIS schools.

As noted by Minishi-Majanja (2009), library and information science education and training in Africa, which provides qualified staff to the library and information professions is under serious challenge that relates to producing competent graduates in line with the current trends and perspectives. This cannot be disconnected from the nature of curriculum used in training librarians.

The curriculum is an important instrument in the training of professionals both in librarianship and any other profession. In line with the changing environment and the demands of the digital environment that librarians operate, it is pertinent to take a look at the IT content of the curriculum used in the training of future library practitioners. Riley-Huff & Rholes (2011:139) observed thus:

“with regards to the status of technology course offerings in LIS programs, there has be a significant increase in the number of technology related courses, but the numbers of technology courses vary considerably from program to program and the content of individual courses appears to vary considerably as well. There appears to be a clear need for additional courses at a more advanced level.

If the painted scenario is true of a developed nation, then one wonders what would be expected of libraries education in developing country. Jain and Jorosi (2017:42), x-raying the LIS education system stated that:

New information technology competencies and skills required for LIS professionals have critical impact on LIS education system and hence, there is increase in technological programmes, such as database, design, web design, digital libraries, database development system analysis, computer programming, and networking and server management.

From the above, the need for redesigning the curriculum content in terms of information technology-related courses need not be over emphasized. There should be no delay in ensuring that library schools in developing countries align with the demands of contemporary society in terms of technological skills and competencies.

5. Justification for Preparing Future Libraries in Developing for the Digital Environment

Developments in our society technological or otherwise have brought significant changes to library and information science (LIS) education all over the world (Edegbo, 2011). There is the need to have efficient and dynamic personnel that can translate the objectives of the library into reality (Adeniji, Babalola & Adeniji, 2012). Library and Information Science (LIS) education is becoming a highly competitive market-driven activity in which providers must keep abreast with the latest technological development and teaching methods, and ensure that their services are tailored to the rapidly changing demands of users (Al-Suqri, 2010, p.51). LISs school according to Saad, Mohamad & Nadzar (2012) need to equip students with new skills in order to be employed in libraries and beyond. Nkanu, Iyishu & Ogar (2013:3) citing Mohammed (2003) maintained that the need for the provision of library and information science education and the acquisition of relevant knowledge, techniques and skills for effective and efficient library and information work is needed now more than before due to differences in library and information systems, services and infrastructure to cope with the changing needs and expectations of the 21st century people, societies, communities and institutions.

The development of manpower to do effective work in library and information centres is vital. There are serious concerns for the curricular of library and information science education to meet the present digital society with respect to library and information service (Edegbo, 2011). As pointed out by Chawinga (2015), it is inevitable to have a well-trained human resource that can ably and efficiently source, retrieve and disseminate information that are available in various formats to support the complex, economical, educational and research activities and organizational and individuals in the complex and interconnected global economy.

According to Minishi-Majanga (2009), traditional employers such as libraries require market-ready professionals who will “hit the ground running”. They are expected to go beyond knowing the ins and outs of information work to have excellent knowledge and skills. As rightly captured by Olanipekun & Issa (n.d), the traditional library and information environments have cared in for the new technologically propelled information environments. Wawire & Messah (2010:152) notes that:

“Technology is moving librarians into new roles, some welcome, some uncomfortable, but nearly all of benefit to library patrons. In most cases, these new roles are an addition to, not a replacement for traditional duties. New services will continue to develop but many traditional library services will continue in some form for the foreseeable future.

Integrating technologies to library services has resulted to influx of visible changes in virtually every facet of library practices. According to Kamba (2011), LIS curriculum need to consolidate ICT concepts, knowledge, skills and proficiency into core competencies, and LIS schools need to provide adequate content and practice that will enable LIS graduates to adapt and use ICTs effectively. No doubt, digital libraries are here to stay and the conversion of traditional to digital is inevitable (Sharma & Vishwanathan, 2001) – Appropriate care should be taken to develop systems and managerial skills as well. Matusiak, Stansbury & Barczyk (2014) opined that the expertise expected from the new generation of LIS professions is highly specialized and indeed does require an advanced professional degree, but the areas of specialization shift from providing information services to teaching information literacy skills. As expressed by Khan & Bhatti (2012), the emergency of new information and communication technology, internet, World Wide Web pose new challenges for library professionals, therefore, it requires librarian to become positively energetic, equipped with greater skills and capabilities to survive and thrive in this new digital environment. Chandler (2001:260) is of the view that:

“Today’s courses must prepare graduates to provide information with a combination of technological competence, traditional knowledge of information resources, and re-calibrated, (but traditional information) services with a client centred perspective.

In line with these changes, new services are emerging thereby placing a demand on practicing professionals and library educators. According to Chiware (2007), one of the challenges facing digital library projects in African has been the readiness of the university libraries in terms of skills and knowledge to implement the digital and electronic library services. To overcome the low comfort level of technologies, there is need to embark on result oriented training practices for librarians (Ali, Yakub, Nweke & Makintamni, 2014). If our field (library profession) does not evolve along with the demographic evolution of our nation, the real threat to the future of libraries will not be e-books or mobile devices or austerity measures, rather it will be the library becoming an organization that is ossified and irrelevant to much of society (Jaeger, Bertot & Subramaniam, 2013:246). As rightly captured by Fourie (2004:62).

Librarians have to secure a future in cyberspace, among cybrarians, Web masters, knowledge managers and knowledge officers. They have to deal with a growing number of contexts for information (e.g. e-commerce and competitive intelligence, as well as a growth in the information needs of ordinary citizens (e.g. health, consumer, legal and financial information).

The growth of digital libraries involves digitalization of existing library material, connectivity to the users in the world online and offline, integration with networking and availability on the World Wide Web (WWW) (Sharma & Vishwanathan, 2001). Looking at the above, it is obvious that new skills and competencies are required of information practitioners to be able to digitize existing library materials and migrate from the analogue library environment to the digital library environment.

6. Review of the Status of Library and Information Science Education in Selected Countries

Library and information science (LIS) education is experiencing a period of change, reflecting a combination of internal and, more importantly external factor (Michalis, 2009). Kavulya (2007) observed that given the interdisciplinary nature of library science education, that LIS schools are caught in between selecting combinations of domains that give graduates the best knowledge and skills in line with current paradigm shift in information theory and practice.

Library and Information Science Education in Ethiopia

Library and information science education in the Jimma University was established in 2005 based on Jimma University Library System (JULS) stakeholders’ need assessment. The stakeholders need assessment was aimed at launching the department of library and information science, which was influenced by the non-existence of the professional LIS education in the country. Mathew (2014) notes that, the country had launched national modular curricula for Bachelor of Science in Information Science Programme and it is adapted by all the universities in Ethiopia.

Library and Information Science Education in Kenya

Kavulya (2007), notes that the current LIS programmes in Kenya do not address the current job market requirements due to due to inadequate teaching resources at LIS training, lack of adequate ICT content in the courses, inadequate length of courses, courses that are outright irrelevant to the job market and inadequate industrial attachment for LIS students.

Literatures surveyed also revealed that LIS programmes in Kenya vary from one institution to the other. Kavulya (2007) pointed at the need for LIS institutions in Kenya to review and redesign their courses in line with the market requirements. He discovered that courses in Kenya are found to include courses such as communication skills, management information systems, user/customer services, reference services, information searching and retrieval, knowledge management, cataloguing / classification and indexing, principles of management, subject analysis, research methodology, evaluation of information systems, strategic planning, information records management and archiving principles.

Library and Information Science Education in Botswana

The Department of Library and Information Studies (DLIS), Botswana has made significant progress. The programme which started with a certificate / diploma courses, has reached to PhD level. The DLIS as noted by Jain and Jorosi (2017) is one of the best known departments in its field in Africa. In their view, the department needs to build on its existing reputation to take it forward by enhancing quality teaching and ensuring its continued relevance.

Library and Information Science Education in Malaysia

As pointed out by Jamaludin, Hussin and Mokhtar (2016), “the establishment of Multimedia Super Corridor, the vision 2020, and the coming of the knowledge economy have motivated LIS educators to play their roles towards these developments. These aspirations have resulted in number of development that has taken place in the faculty of Information Management in relation to the education and training of LIS professionals. These visible developments includes establishment of new specialized undergraduate programme, changing of the name of the faculty, expansion of the academic staff and the use of two-tier system of education and training

As noted by Saad, Mohamad & Nadzar (2012), keeping pace with national needs and social changes has influenced library and information studies education since its inception in the 1950s. Library and information studies education in Malaysia began with a modest aim to fulfill library position at the initial phase, then the discipline grew and professional courses began to be offered by the universities. However, throughout its development, LIS education is driven by government policies, technology changes and societal needs (Saad, Mohamad & Nadzor, 2012).

7. Expectations of Library Schools in Developing Countries towards the Preparation of Future Library Environment

Expectations are high of what is required of library schools to be able to groom librarians that are well equipped to function effectively in the digital environment, which is the core feature of tomorrow’s library environment. Below are outline of a few of the many expectations: of library schools in developing countries.

i. ***Inclusion of digital library course:*** To ensure that librarians-in-training in developing countries are fit to work functionally in the digital environment. It is imperative to include digital library courses in the library and information science curriculum. Prospective graduates of library schools should be equipped with various digital skills that are required to manage digital-oriented libraries. They should be well groomed in digitization, digital library architecture, digital library software etc.

ii. ***Restructuring and reviewing of courses offered in library schools:*** There is need for a thorough review and restructuring of courses offered in library schools in developing countries. It is basically unfeasible to use analogue-based curriculum to turn out graduates with digital-based skills. Dasgupta (2009) opined that LIS syllabus has to be revised from time to time incorporating new areas of knowledge as well as eliminating irrelevant and obsolete areas. LIS programmes need to constantly adjust the curriculum to teach the necessary concepts and digital library skills to prepare new professionals for the emerging areas of librarianship. Saleh (2011) argues that library schools wherever they are cannot afford to trail behind in changing, modifying and updating their curricular to reflect current trends in the information industry. Ganaie (2012) suggest that LIS schools should regularly update their curriculum in order to produce competent professionals. Regular assessment and update of the curriculum in LIS programme should be treated as vital because it helps to ensure quality and provide platforms to cope-up with rapid changes in the field and to adapt the curriculum to the needs and conditions of the country, society or the community (Gojeh & Bayissa, 2014).

iii. ***Provision of functional and well-equipped laboratories / learning resources:*** Librarianship is a practical oriented profession. Laboratories and practical workrooms are necessary for impacting the required skills to would-be-graduates of library schools. The practical work rooms / Departmental libraries should be fully equipped with functional and modern facilities with the desired manpower to manipulate than and used them to teach students in library schools. Learning digitization of documents cannot be practicable with the machinery in place. To train and prepare future librarians, ICTs facilities should be adequately provided and given priority in the scheme of things. As pointed out by Dasgupta (2009:11), each and every department of LIS schools must have adequate infrastructural facilities.

iv. ***Engaging in intensive exchange programmes:*** For library schools in developing countries to be fully repositioned to produce qualified digital compliant graduates, it is expedient that they engage in exchange

programme. This will afford faculty staff in library school in developing countries the opportunity to acquire functional digital library skills. Hardly, can any field make progress without international collaboration in modern society (Virkus, n.d.).

v. **Recruitment of qualified staff in library schools:** The survival of library and information science education depends largely on the quality of faculty and students (Edegbo, 2011). Saleh (2011) in his work “Educators perspective on library schools in Nigeria” pointed out that all the library schools in Nigeria lack adequate qualified faculty staff with the bulk of the faculty staff at the lower academic cadre. The quality and quantity of teaching staff have direct bearing on the quality of teaching and research and invariably on the quality of the products churned out into the labour market (Mohammed, 2008). The success of any teaching program depends on the quality of the teaching staff, hence, there is need for careful selection of teaching staff to ensure that only those with the right academic and professional qualifications, are allowed to teach (Kavulya, 2007).

vi. **Inclusion of stakeholders to harmonize curriculum used in training African librarians:** According to Ganaie (2012:41), “by conducting seminars, conferences, workshops etc at regional and national levels on the theme of LIS education, a common platform can be provided to the LIS professionals, LIS educators, LIS researchers and other stakeholders in LIS profession to share their experiences, expertise, competencies and their vision of LIS education, of which the outcome would help in improving the standard of LIS curriculum.

vii. **Quantity control and assurance:** The proliferation of library schools in Africa required that quality control mechanism should be put in place to ensure that the quality of graduates from these library schools can fit into the present and future library environment. As rightly put by Monica & Bii, (2016), there is an urgent need for quality control checks since with rapid expansion of LIS education, the standards of teaching and learning are bound to be lowered by cutting of corners and thus make the graduates unemployable.

viii. **Provision of functional and well-equipped ICT laboratory in library schools:** at such a time as this, it is imperative that library schools should not only have a functional ICT laboratory, but must ensure that it is furnished with ultra modern equipments that will aid teaching and learning in the digital environment. Kavulya (2007) contends that the field of LIS is highly dynamic and requires current information resources to support teaching and learning. He went further, advocating for the availability of adequate computing infrastructure including computer hardware and software, efficient internet connectivity, intranets and multimedia storage facilities.

8. Conclusion

This paper has clearly shown the need for ensuring that librarians-in-training are adequately prepared for the future library environment, where digital skills and competencies will be the driving force of the profession. In order for library and information science professionals to remain relevant in the information industry/sector, there is an urgent need to embrace technological innovations and creativity in the training of future librarians because, with the penetrating influence of information technologies on every sector of the global space, librarians can no longer claim monopoly as custodian of knowledge, if they are reluctant in embracing the required changes both in practice and training of the future librarians, then it is only time that will tell the fate of the future library environment .

References

- Abioye, A. (2013). Enhancing library and information science education through cross-border collaboration: The experience of university of Ibadan, Nigeria and University of Ghana. Paper presented at the IFLA WLIC 2013. Available online at: <http://library.ifla.org/174/1/199-abioye-en.pdf>
- Abubakar, B. M. (2014). Rethinking e-learning in library and information science (LIS) education in Nigeria: developing a model for the 21st century. *Information and Knowledge Management*, 4(9): 68-76.
- Abubakar, B. M. (2014). Rethinking e-library in library and information science (LIS) education in Nigeria: Developing a model for the 21st century. *Information and Knowledge Management*, 4(9):68-76.
- Adeniji, M. A., Babalola, G. A. & Adeniji, M. A (2012). Workers training programmes in two university libraries in Nigeria. *Library Philosophy and Practices* (e-journal). <http://digitalcommons.unl.edu/libphiprac/769>.
- Ali, A. A., Yakub, M., Nweke, P. O. & Makintami, A. (2004). Training librarians for electronic library services in state university libraries in Nigeria. *Scholarly Journal of Education*, 3(5):46-51.
- Chandler, Y. J. (2001). Reference in library and information science education. *Library Trends*, 50(2):245-262.
- Chisita, C. T. & Mataranyika, T. (2013). Towards a new paradigm of LIS training for Agricultural librarians in Zimbabwe: challenges and opportunities. Paper presented at 2013 IFLA WLIC Conference, Singapore, 2013.
- Chiware, E.R.T. (2007). Training librarians for the digital age in African university libraries. Pre-IFLA Satellite Meeting, Durban, August 2007. <http://www.ifla.org/IV/ifla73/satellite/programme.en.pdf>.
- Olanipekun, S. & Issa, A. O. (2004). Information business prospects: implications for library education in the 21st century Nigeria. *The JOBMAS*, 1(3). School of Business and Management Studies, Federal Polytechnic, Offa. July- December: 92-102
- Dasgupta, A. (2009). Preparing future librarians in India: a vision for LIS schools of Indian universities in the 21st century. World Library and Information Congress: 75th IFLA General Conference and Council, 23-27 August,

- 2009, Milan, Italy. <http://www.ifla.org/annual-conference/ifla75/index.htm>.
- Edegbo, W. O. (2011). Curriculum development in library and information science education in Nigerian universities: issues and prospects. <http://unllib.edu/LPP>.
- Ekoja, I. I. (2011). Periscopic survey of current library and information science education and practice in Nigeria. *The Information Manager*, 11(1&2): 1-5.
- Hashim, L. B. & Mokhtar, W. H. N. (2012). Preparing new era librarians and information professional: trends and issues. *International Journal of Humanities and Social Science*, 2(7):151-156.
- Jaeger, P. T., Bertot, J. C. & Subramaniam, M. (2013). Preparing future librarians to effectively serve their communities. *The Library Quarterly*, 83(3):243-248.
- Kamba, M. A. (2011). ICT competency framework for library and information science schools in Nigeria. *The Journal of Library and Information Science*, 3(4):68-80.
- Khan, S. A. & Bhatti, R. (2012). A review of problems and challenges of library professionals in developing countries including Pakistan. *Library Philosophy and Practice* (e-journal). Paper 757. <http://digitalcommons.unl.edu/libphilprac/757>.
- Matusiak, K. K., Stansbury, M. & Barczyk, E. (2014). Educating a new generation of library and information science professional: a United States perspective. *Library Reviews*, 82(2):189-206.
- Michalis, G. (2009). Skills developed through library and information science education. *Library Review*, 58 (7):527-540.
- Mohammed, Z. (2008). Attracting students into library and information science programmes in developing countries. The Nigerian experience. Paper presented at World Library and Information Congress: 74th IFLA General Conference and Council, 10-14 August, 2008, Quebec, Canada.
- Nkanu, W. O., Iyishu, V. A. and Ogar, F. O. (2013). Education and training for library and information science professionals in Nigeria: their role, opportunities and challenges in the information age. *Knowledge Review* 28 (2):1-10.
- Nzotta, B.C. (1984). The social origins of librarians in Nigeria. *Annals of Library Science and Documentation*, 31(3/4):104-112.
- Riley-Huff, D. A. & Rholes, J. M. (2011). Librarians and technology skill acquisition: issues and perspectives. *Information Technology and Libraries*, pp.129-140.
- Roberts, K. (n.d.). Facing the future: a vision document for British Columbia's public libraries. Available online at: <https://commons.bclibraries.ca/wp-content/uploads/2012/12/Facing-the-Future-A-Report-on-the-future-of-libraries-for-the-Province-of-British-Columbia.pdf>
- Sharma, R. K. & Vishwanathan, K. R. (2001). Digital libraries: development and challenges. *Library Review*, 50; 10-15.
- Wawire, O. F. & Messah, O. (2010). Challenges faced in establishing university libraries in Kenya. *International Journal of Library and Information Science* 2 (8):148-154.
- Witten, I. H. (n.d.). Digital libraries: developing countries, universal access, and information for all. Available online at: <https://www.cs.waikato.ac.nz/~ihw/papers/04-IHW-DL.develcountries.pdf>