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Library and Information Science (LIS) Education in the 21st Century: Emerging Skills for a Changing World

by

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Abstract

The LIS professionals are the bridge between information resources and the readers because of the skill they possessed. In the library, resources are acquired and processed based on rules and regulations of the profession. And these rules and regulations do not come in rosy way. They are acquired from the academic world where the skills are being taught, to handle library information resources in a way that users can easily access them. The core skills traditionally associated with library/ information science include information handling skills - cataloguing, classification, indexing, enquiry work and user education training skills with facilitating skills and evaluation skills. An information professional can possess a variety of these skills, depending on the sector of the library in which the person is employed. Some essential 21st century changing cross-sector skills are: IT skills, such as word-processing and spreadsheets, digitization skills, and conducting internet searches, together with skills in digitization, loan systems, databases, content management systems, and specially designed programmes and packages. Also the available soft skills include skills such as negotiating, conflict resolution, and time management, which are useful for all interactions at a workplace. In the innovative age of information science and technology, it is crucial for librarians to possess the necessary competencies for working in a specialized workplace, where the equipment and the clients' needs are changing rapidly. Thus, LIS education should incorporate the modern information-processing skills for verity of the profession in a changing world of the 21st century

Key Words: Library and Information Science (LIS) Education, 21st Century, Skills, Changing World

Introduction

The concept of library developed when people started reading and writing but the need of library education was felt in the late 19th century when concept of library changed from store house to service institution. Globalization of education, complex nature of demands of the users, explosion of knowledge and literature, and innovation of information technology also had a role to play in the establishment of library schools which bring about library education all over the world (Khan, 2002).

LIS education in most African countries was more concerned with training in librarianship. LIS education aimed at producing competent librarians to manage all types of libraries in the countries for sustainability. Other information related disciplines such as documentation, archives and records management were relatively unknown when they started existing, thus, they were not accorded prominence. However, librarianship in Africa owes its origin to colonialism. Colonialism introduced reading and writing among the indigenous people. Until then, the two activities were alien. Colonial governments introduced Western education which entailed among others, reading and writing. In an attempt to boost the two activities, a need was felt to provide the new literates with information materials, basically books, to further their reading and writing skills (Otike, 2017).

Library and Information professionals apart from their educational practices required different kinds of skills and competency to give right information at the right time for right users. The role of libraries and librarians are changing rapidly due to growth in science and technology. Prior to this, library professionals' jobs were limited to library boundaries but now, it has spread across the globe known as digital library. In this age, it is difficult to manage and preserve all changing forms and formats of the documents for all types of patrons using all key Skills.

Today, librarians need to play different roles which demand various skills ranging from an old culture to new fashion (Muddapur and Agadi, n.d).

Until recently, information professionals did not see the need to deal with informal knowledge and intellectual capital. Their role was restricted to managing formal knowledge. As more and more organisations realise the value of informal knowledge in an increasingly competitive knowledge economy, there is a growing need for information professionals to sharpen their skills and assume the role of knowledge managers (Hawamdeh and Foo, 2001). Mohammed (2003) in Nkanu, Iyishu and Ogar, (2013) asserted 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. Aina (2007) as cited by Nkanu, Iyishu and Ogar, (2013) is of the view that, the Nigerian LIS professional is expected to possess skills in repacking of information, management and operation of audio-visual equipment, documentation of indigenous knowledge, preservation and conservation of records, provision of query and answers service in the communities.

Hashim and Mokhtar, (2012) explained that the foundations of librarianship, which include skills such as cataloguing and user education, are as relevant in an electronic age as they are in a print based one and will continue to provide a solid base of skills. It is hoped that in this fast changing environment, librarians and information professionals must be someone with multi-skills, multi-tasking abilities, and competent in areas of work such as management, communication, language, public relations and others.

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 rapidly growing flow of information. This new information environment requires new skills in seeking, processing and using information. The base for individual ability to understand and use information is a qualitative, ongoing learning process (Hashim and Mokhtar, 2012).

In a study carried out by Hawamdeh and Foo (2001), it can be seen that the 75 participants agreed that information-seeking skills are a must for information specialists. This includes the ability to capture, index, retrieve and disseminate information. The second most important skill as highlighted by the study is the social and communications skills. Seventy-two participants or 96% of the participants emphasized the importance of social and communications skills. Most participants see the role of information professional as a mediator who must possess the skills of active listening and have the ability to clearly convey ideas and information to others. Managerial and leadership skills are also essential for information specialists to handle projects that involve multiple departments within the organisation. And it was stated in the study that managerial skills are essential for knowledge worker in the organisation. Sixty-five participants or 86% of the participants enveloped in the study agreed that an information specialist should be friendly, open minded and able to adapt to changes and relates to new ideas. The research revealed that an information specialist should be able to work with people in the organisation regardless of their diverse subject background. Also he must be able to motivate and convince people to share information and knowledge. Information professionals need to be proactive, responsive and have diverse subject background.

Library Education

According to Peiris, (1993) in Thomas (1999), in the century that has passed, since Melvil Dewey established the world's first library school at Columbia University in January 1887, the education of librarians, not only in the United States, but also in Africa, has altered radically in a number of fundamental ways. The changing names of library schools are an excellent reflection of the evolution of the discipline. Dewey's original library school, for example, was known as the School of Library Economy. This gradually changed its name to the School of Library Service. More recently, library schools have become known as schools of library and information science. The terms library science seem increasingly obsolete and antiquated, as this discipline is merging to a greater degree than ever before with other disciplines, particularly computer science, communications, education, and the social sciences in the broad sense of the term (Thomas 1999).

Also, according to Abubakar (2021), it is no longer debatable that advancements in our society, technological or otherwise, have brought about significant and tremendous changes to the Library and Information Science (LIS) education globally. In other words, the LIS education has been experiencing a radical change especially in the last couple of decades which results to fundamental changes in all its structures. Such changes are pervasive, global and profound in nature. Additionally, with the recent trend in globalization and its seeping impact on LIS education, the LIS field is now seen as an interdisciplinary field of study that has integrated many new and related areas of such as information science, computer science, information system, knowledge management, information architecture, digitization, content management archives and related areas. This fundamental revolution has implications on the profession and has led to the offering of joint degrees with other subject by LIS schools.

Okello-Obura and Kigongo-Bukenya, (2011) in Abubakar (2021) opined that it is critical to note that advancements in Information and Communication Technologies (ICTs) have been the driven force for all these developments. ICTs have transformed LIS education and libraries in general, and its introduction to the LIS field demands that LIS education must be technologically-based and market driven at the same time to sustain library practices. The above state of affairs requires LIS practitioners to develop and overhaul their curricular in order to meet the requirements of the new information age which circles around technology.

Furthermore, a ground-breaking study carried out by KALIPER (2000) in Abubakar (2021) has identified six key trends that have advanced LIS education. They are:

1. Addresses of broad array of information environments and information problems, even though the library settings which remain the heart of many LIS programmes;

2. Witnessing of the emergence of user-centered courses which has also continued to incorporate different perspectives from other fields of study i.e. multidisciplinary issues;

3. Increase in the infusion of IT into the LIS curricula i.e. information technology has underlined all aspects of the curriculum. As such, it was expected that the LIS programmes would bear the responsibility of keeping their students on the cutting edge of the existing and new technologies as they become available;

4. Experiment of flexible programming to provide specialization within the curriculum;

5. Instruction in diverse formats (e.g. course length, day and time of course offering, as well as distance education via the World Wide Web) to provide students with more flexibility;

and

6. Expanding curricula by means of offering related degrees at the undergraduate, master's and doctorate levels.

(Abubakar, 2019; NALISE, 2020) in Abubakar (2021) corroborated that presently, any meaningful discussion on LIS education in Nigeria needs to consider the fact that LIS education has come a long way since the formation of the first university-based LIS School in the country at the University of Ibadan as previously reported. The most recent development is the proliferation of LIS schools in universities, polytechnics and colleges across the country. Hence, one can conveniently say that LIS education in Nigeria is at the moment witnessing a turning point. It is therefore significant to know that expansion in LIS education has become obvious in the country, mostly in recent years. Moreover, many new institutions are founded fueling the need for more LIS schools that will train LIS professionals that will manage the libraries attached to these institutions.

LIS Education in Nigeria

Given the growing development, LIS education in Nigeria has reached its peak with many universities (both public and private) offering different programmes at bachelors, masters, and PhD levels in LIS, although operating under different faculties. At the moment, some LIS schools in Nigerian universities are housed under faculties of education, some in social sciences, some in management sciences, while few are under faculties of information and communication etc. Furthermore, (NUC, 2014; Abubakar & Auyo, 2019) in Abubakar (2021) expressed that the names and nomenclature of the programmes vary. In the beginning, most departments were simply named Departments of Library Science or Library Studies. Lately, however, many of the

departments have changed their names to Department of Library and Information Science/Sciences.

At the moment, some of the prominent names for LIS departments in Nigerian universities include: Library and Information Science, Library and Information Sciences, Library, Archival and Information Studies, Library and information Studies, Information Resources Management etc. In terms of nomenclature, different bachelor's degree courses are provided by LIS departments in Nigerian universities which include among others: Bachelor of Library and Information Science (BLIS), Bachelor of Arts (Library and Information Science) (B.A. LIS), Bachelor of Science (Library and Information Science) (B.Sc. LIS) where LIS is offered together with other academic subjects in the Sciences, Social Sciences or Arts (commonly found at University of Nigeria Nsukka and Bayero University, Kano, Nigeria). Another one is B. Tech (Library and Information Science/Technology). While at the postgraduate level, LIS schools offer variety of Post-graduate programmes. For instance, the Bayero University, LIS School has Post-Graduate Diploma in Information Management (PGDIM), Master of Library and Information Science (MLIS), Masters in Information Management (MIM) and PhD in Library and Information Science. In addition, according to Saka (2015), the University of Ibadan (UI) LIS School runs post-graduate programmes such as Masters in Library and Information Studies (MLIS), Masters in Archives, Records and Information Management (MARIM), Masters in Health Information Management (MHIM), Masters in Publishing and Copyright Studies and PhD with specialization in diverse areas. Other university-based LIS schools have post-graduate programmes in different areas.

(NUC, 2014; Abubakar & Auyo, 2019) in Abubakar (2021) asserted that as regards to the curriculum, for a student to earn a BLIS, B.Sc. or B.A LIS degree, they must pass at least 120

credit units in a four-year programme or at least 90 credit units in a three-year programme. It is worth stating that the system uses both external and internal examination patterns to finally grade the students. There are little variations in terms of curricula offerings, although the contents are more or less the same. However, this is normally dictated by the National Universities Commission (NUC) Benchmark for Minimum Academic Standards (BMAS). For the post-graduate programmes, there is also a difference in the curriculum of the LIS schools in Nigerian universities. Nonetheless, some of the LIS schools have updated the content of their post-graduate curricular to reflect the changing paradigm and societal needs and some are in the process of doing so. Masters and PhD degree programmes are offered on full-time or part-time in most of the universities.

The undergraduate course content from the NUC Benchmark for Minimum Academic Standards (2014) in Abubakar (2021) includes some of the following courses: Introduction to Library and Information Studies, Introduction to Information Science, Information in Libraries and Society, Introduction to Library and Information Resources, History of Libraries and Information Centres, Library and Information Centre Visit, Introduction to Bibliography, Organization of Knowledge I, Library and Information Service to the Rural Community, Management of Library and Information Centre, Libraries and Information Services for Children and Adolescents, Serials Management, The Information User, Information Literacy, Indigenous Knowledge System etc.

In an effort to address squarely and decisively the curricular issues in Nigerian LIS education, the Librarians' Registration Council of Nigeria (LRCN) has made a gigantic effort by organizing a summit on Library School Curriculum Review and Development of Benchmarks which was held at Lokoja, Kogi State, from 14th-18th June, 2015 with the main aim of enriching

the curriculum of library schools in Nigeria in line with the recent global best practices for library sustainability. In that summit, lingering matters concerning course contents for LIS schools in Nigeria, facilities, nomenclature, staffing, location of LIS programmes, process of implementation of benchmark, establishment of LIS programmes and accreditation were painstakingly deliberated upon by stakeholders. As a result of the summit, the LRCN is currently developing a unified curriculum for LIS schools in Nigeria which has passed through some stages.

A situational analysis of students' enrolment shows that LIS as a course of study is gradually becoming popular in Nigeria. However, PM News, (2019) in Abubakar (2021) noted that it is important to note that regardless of the increase in its popularity, some students are not interested or passionate about studying or choosing LIS as their first choice course. This situation raises serious concern about the need for attracting quality students into the various LIS programmes. Despite the negative trend, hundreds of students are yearly enrolled into LIS departments in Nigerian universities, although no definitive statistics is available about the students' enrolment. This situation additionally means that hundreds of LIS professionals are being produced every year by universities.

According to PM News, (2019) in Abubakar (2021) job prospects for LIS graduates in the job market continues to be brighter. With the increasing demand for higher education, more tertiary institutions are being established, which means more potential jobs available for LIS graduates in Nigeria. Similarly, some LIS graduates are employed in other sectors of the economy since the modern day LIS training encourages the training of LIS professionals to think outside the box. That is why the acquisition of 'critical thinking' skills by LIS graduates is

emphasized; others are on their own courtesy of the entrepreneurship education they received during their study years.

LIS Professional Changing Skills

To take an assessment, there is the need to be acquainted with the basic principles of professionalism and skills. Skills are very essential for every professional, which help them to deliver services on time and in efficient manner to their users (Kumar, 2018). According to Mazumdar (2007), skill is an ability or proficiency in execution or performance, which is required for a person to plan and execute an action designed to achieve some goals or accomplish a particular task. A skilled person has the ability to perform any task successfully. The skill the person possessed can give the mind to face the challenges that occur in a particular profession because of the social, economic, educational and technological changes. Thus, in order to cope up with the ever-changing library and information science profession, librarians must have the relevant skills to perform their professional functions effectively.

The roles of LIS professionals are very important in the library because they have the skills required to acquire relevant information resources for the library and are able to process them according to the library system. The LIS professionals are the bridge between information resources and the readers (Kumar, 2018). In the library, resources are acquired and processed based on rules and regulations of the profession. And these rules and regulations do not come in rosy way. They are acquired from the academic world to handle library information resources in a way that users can easily access them. The core skills traditionally associated with library/information science include information handling skills - cataloguing, classification, indexing, enquiry work and user education training skills with facilitating skills and evaluation skills.

(Hashim and Mokhtar, 2012). An information professional can possess a variety of different skills, depending on the sector in which the person is employed.

Some essential 21st century changing cross-sector LIS skills are:

- IT skills, such as word-processing and spreadsheets, digitization skills, and conducting internet searches, together with skills in digitization, loan systems, databases, content management systems, and specially designed programmes and packages.
- Customer service: An information professional should have the ability to address the information needs of customers.
- Language proficiency: This is essential in order to manage the information at hand and deal with customer needs.
- Soft skills: These include skills such as negotiating, conflict resolution, and time management, which are useful for all interactions at a workplace (Wikipedia, 2019).

In the innovative age of information science and technology, it is crucial for librarians to possess the necessary competencies for working in a specialized workplace, where the equipment and the clients' needs are being changing rapidly. Such changes are happening at a fast speed that every day the new skills and styles are needed to handle the information and the related ideas (Abotalebi and Biglu 2017). This is in line with Danchak's (2012) as cited by Chikonzo, Bothma, Kusekwa and Mushowani (2014) who advised that libraries and librarians need to be where the users spend most of their time. Such a shift in the characteristic and type of library clientele calls for the need to identify new professional skills and competences which librarians need in order to effectively function in this digital age.

Today's changing environment in library and information centres look for change in the professional skills besides the academic skill. The dramatic changes, largely the result of rapidly

evolving information and communication technologies (ICTs), have impacted significantly on the knowledge and skills required for library and information science (LIS) professionals. The transformed landscape requires a new generation of LIS professionals to effectively and efficiently bridge it (Ravi, 2018). In addition, Ravi (2018) cited National Knowledge Commission (2007) while recommending the role of libraries as “gateways to knowledge” emphasized the skills required to fulfill the changing role of libraries as Library and Information handling skills, service orientation, ICT knowledge skills, communication and training skills, marketing and presentation skills, understanding of cultural diversity and knowledge mapping skills.

According to Ravi (2008), in order to cope up with the ever-changing library and information science profession, the library professionals must be a skilled professional. The skills can be categorized as domain specific skills, essential skills - reading, writing, computer application, creative thinking, analyzing skills etc. As part of the skills, the profession requires managerial skills - planning, organisation, managing negative people, assertive skills and conflict management skills. Leadership Skills are part of the key skill that a librarian needs, to be able to arrive at the target of the organization. Leadership skills include goal setting, team building, motivation, risk taking, formulating vision and others. In the library, there are lot of sectional duties with its peculiarities and uniqueness, as such, contextual skills – operational skills in different environment or culture comes in, in order to achieve the organizational goals.

According to DIK (2011) in Widén and Kronqvist-Berg (2014), seven key areas were identified for professional efficiency in LIS. They are digitalization, reading skill, scholarly communication, participatory culture, pedagogical skills, marketing, and academic skills. The key areas focused on communicative skills, in various ways as well as juridical competence

within the different areas. Digitalization skill entails technical competency and ability to communicate with IT personnel and systems, juridical competence, license agreements, and procurement. In addition, reading skill involves information and media literacy skills competency, to meet all kinds of user groups (children, multicultural and people with disabilities). Consequently, the library of this century must give ICT a top priority. These skills will assist Library and Information Science professionals to effectively apply ICT-based technologies to the provision of library and information services (Nkanu, Iyishu and Ogar, 2013).

Challenges to 21st Century Library Education

Accreditation Issue

Some universities are offering diploma programmes as diploma in library science and diploma in library and information management while some polytechnics are still running ordinary national diploma (OND) or diploma in library science which are not accredited (Saka, Garba and Zarmai 2018). And even some state and private universities are running degree programme in LIS that are not accredited. Thus, this issue affects skill acquisition in general.

Heads of library schools Issue

The proposal for the establishment of library schools in Africa usually comes from heads of institutions' libraries. As their tenure in office is about to end, they usually take up a move to establish library schools by presenting the proposal before the institution's management. With the management approval, head of institutions' libraries (university, polytechnic, College of Education and monotechnic) now act as either the coordinator of LIS department while still the head of institution's library. The head can still be the coordinator of the newly established department on retirement and take-up contract appointment as the head of new library school.

Some of them were practicing librarians throughout their career path and lacks adequate teaching experience. This situation affects the development of LIS programmes in Nigeria in the areas of curriculum design, development and implementation; staffing, physical resources development, which in turn affects skill acquisition in LIS schools in Nigeria etc (Saka, Garba and Zarmai 2018).

Changing Nature of LIS

Abubakar (2021) explained that in the contemporary era, the LIS environment is being confronted with a number of challenges that emerge from the changing nature of the discipline. LIS education, being an important segment in the economy of knowledge is radically and unavoidably affected by this important development. The challenges presented by those forces demand that LIS schools curriculum in Africa should be reviewed and change the contents of the curricula with the aim of equipping their graduates with the knowledge and skills that would enable them succeed in the ever changing world of information.

Low level of skills

There are no adequate facilities provided for the acquisition of ICT skills in library schools in Africa. This is because of the inadequate computer laboratories, which has led to low level of ICT skills/practices. It is paramount to note that the traditional mode of teaching in library schools in Africa cannot withstand the modern trends as computers and other ICT facilities are needed in training the prospective LIS graduates. Regrettably, the number of computers in the ICT laboratories in library schools in Africa cannot cater for the teeming population of student (Saka, 2015).

Staffing Situation

Ononogbo, (2014) in Saka (2015) opined that most library schools face the problem of staffing especially at the professorial cadre. As a result of this, library schools are compelled to look for visiting/part-time lecturers. The situation could partly be attributed to the searching of LIS educators for greener pastures. For example, with the establishment of new universities in Nigeria, some LIS Educators have moved or transferred their services to the new universities; thus, the older library schools suffer acute shortage of lecturers. This has led to overloading the few available faculty members with many courses to teach. It is therefore noted that many countries plan to develop their domestic LIS education programmes but problems associated with inadequate resources and infrastructure, as well as qualified trainers, still affect the dispensation of modern syllabi (Ocholla, 2000).

Professionalism Issue

As Muddiman (1999) in Thomas (1999) observes, the discipline of library science is facing increased competition from other disciplines. The core claim of the information and library sciences to professional legitimacy has been challenged by the development of new sciences of resource based on computing, management and systems theory. The close of the twentieth century, characterized as it is by considerable advances in information technology, is a particularly appropriate time for librarians to reassess their social relevance and for schools of library and information to consider their priorities and ask a number of questions about curriculum review as well as the role of library and information studies within the academy. It has been recognized, at least by most within the field, that library and information science students are preparing to enter a profession as valid as those of law or medicine, yet the professional status of librarians continues to be questioned by other professionals such as medical doctors and lawyers.

Facilities Shortage

(Diso, 2009; Saleh, 2011; Atsugh and Ukende, 2013) in Saka, Garba and Zarmai (2018) explained that the proliferation of library schools has caused the problem of meeting up with the adequate facilities and resources (building, lecture theatre, classrooms, staff offices) such that the new library schools use the facilities of other departments. Lecturers have to pair in the available offices; clashes in lecture time and over-crowding which are not conducive for the academic development of students. Facilities of other departments such as computers, computer laboratories, internet and institution libraries are being borrowed or loaned for use meaning that they are not available. Infrastructure/ facilities like classroom, lecture theatre, library, computer laboratory, cataloguing and classification workshops are grossly inadequate in library schools in Africa. When approval is given by the institutions' management to establish library schools, they usually make use of institutions' libraries thereby converting or partitioning some sections of the libraries to lecturers' offices, information communication technology (ICT) sections, etc. Some library schools established within a decade still use part of the university or polytechnic libraries for office accommodation, while library schools are domiciled/located as units under a department or as consultancy services unit (Saka, Garba and Zarmai 2018). Where these facilities and resources are available, they are grossly inadequate.

Conclusion and Recommendations

The existing ICT laboratories in all library schools in Nigeria should be well equipped, while the library schools without laboratories should be encouraged to establish one by training efficient manpower to manage and coordinate the established libraries in Nigeria and the yet-to-be established ones in order to sustain library skill acquisition practices. Adequate laboratories

would enhance the provision of adequate and efficient practical and the acquisition of LIS skills. Above all, the parent institutions in Nigeria (universities, polytechnics, monotechnics and colleges of education) running LIS programme should provide adequate funding for the procurement of facilities in the ICT laboratories and other amenities to enhance skill acquisition in LIS. This will further facilitate not only the establishment of demonstration/workshops, but it will put in place practical class in computer training.

References

- Abotalebi, P. and Biglu (2017). Identification of Competencies for Professional Staff of Academic Medical Libraries in Iran. *Open Access Library Journal*, 4: e3657. <https://doi.org/10.4236/oalib.1103657>
- Abubakar, B.M. (2021). Library and Information Science (LIS) Education in Nigeria: Emerging Trends, Challenges and Expectations in the Digital Age. Available at: <http://www.balkanlibraries.org/journal>
- Al-Hawamdeh, S. and Foo, S. (2001). Information Professionals in the Information Age: Vital Skills and Competencies. *Proc. International Conference for Library and Information Science Educators in the Asia Pacific Region, Kuala Lumpur, Malaysia, June 11-12.*
- Chikonzo, A., Bothma, T., Kusekwa, L. and Mushowani, A. (2014). An Assessment of the Changing Needs of Information Professionals in Zimbabwe. *Afr. J. Lib. Arch. & Inf. Sc.* 24 (1) 107-118
- Hashim, L.B. and Mokhar, W.N.H.W. (2012). Preparing New Era Librarians and Information Professionals: Trends and Issues. *International Journal of Humanities and Social Science* 2 (7).
- Khan, H.R (2002). Teaching of library science in Indian universities: Problems and prospects. Available at: ir.amu.ac.in/4285/1/T%205916.pdf
- Kumar, A. (2018). Evaluation of Library and Information Science (LIS) Professional Skills: A Case Study of Dr. B R. Ambedkar Central Library, JNU, New Delhi, India. Available at: *Library Philosophy and Practice* (e-journal). <https://digitalcommons.unl.edu/libphilprac/1816>
- Mazumdar, N.R. (2007). Skills for library and information professionals working in borderless library. 5th Convention PLANNER, Gauhati University, Guwahati, December 7-8, INFLIBNET Centre, Ahmedabad

- Muddapur, S. and Agadi, K.B. (n.d). Library Professionals: Skills for Providing Information Services. Available at: <http://www.iiserpune.ac.in/library/life2017/program/16/10-suman-muddapur.pdf>
- 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).
- Ocholla, D.N. (2000). Training for Library and Information Studies: a comparative overview of LIS education in Africa. *Education for Information*, 18(1), pp. 33-52
- Otike, J. (2017). Library and Information Science education in Anglophone Africa: Past, present and future. *Inkanyiso, Jnl Hum & Soc Sci* , Vol. 9
- Ravi, S. (2018). Challenges in skill development Among library and information Science professional. *International Journal of Research in Library Science*. 4(2) pp 27-39
- Saka, K.A. (2015). Trends in Library and Information Science Education in Nigeria in the 21st Century. International Conference on 21st Century Education at HCT Dubai Men's College, UAE, in November 2015
- Saka, K. A., Garba, S. K. and Zarmai, M.M. (2018). Proliferation of library and information science schools in Nigeria: Issues at stake and quality control. *International Journal of Library and Information Science* 10(9), pp. 94-101
- Thomas, C. (1999). Library Education in the United Kingdom: Past History, Current Trends, Future Possibilities and Implications for Library Education in the United States. A Master's paper submitted to the faculty of the school of Information and Library Science of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Master of Science in Library Science
- Widen, G. and Kronqvist-Berg, M. (2014). The Future Librarian: A Diverse and Complex Professional. Proceedings of the 14th IATUL Conferences. Purdue University Purdue e-Pubs