J Soc Sci, 51(1-3): 79-86 (2017)
DOI: 10.31901/24566756.2017/51.1-3.11

Library and Information Science Education and Training Curriculum at Institutions of Higher Education in Nigeria: A Content Analysis

Oghenere Gabriel Salubi

Department of Library and Information Science, University of Fort Hare, Alice Campus, Alice, 5700, South Africa
E-mail: osalubi@ufh.ac.za

KEYWORDS Information Technology. Education. Library Schools. Professionals. Skills and Competencies

ABSTRACT This paper investigated the current library and information science curriculum used by three Nigerian library schools to prepare librarians for professional practice. The research objectives included: identifying courses that make up the Library and Information Science curriculum in Nigeria, ascertain the skills/competencies that are required of Library and Information Science graduates by employers of labour, and highlight the areas of strengths and weaknesses in the curriculum. Data were collected using the Master of Library and Information Science curricula of three library schools, and a survey which was administered on heads of academic libraries. Data was analysed using qualitative and quantitative methods. Results showed that the curricula were inadequate in information technology related components desired by heads of academic libraries surveyed. A new curriculum reflecting contemporary innovations in the library and information science profession that would enable graduates to be globally competitive is urgently needed.

INTRODUCTION

Societal development especially technological has brought momentous and influential transformation to the ever-dynamic field of Library and Information Science (LIS) world over. Technological advancements have significantly impacted on library operations, education of librarians and competency expectations by employers from librarians as well as library school curricula (Mazumdar 2007).

Rapid transformation in LIS has resulted in significant modifications to course content and programme directions by educators (Siddiqui and Walia 2013), so noteworthy that some library schools are introducing new programmes and changing degree names. As noted by Chu (2006), the most evident and observable of all the changes that have taken place in library and information science education can be found in the curricula.

According to Ocholla (2013),

'a curriculum is a fundamental part of any education or training programmes largely because it provides not only a list of courses or modules offered in a programme, but it also gives information on content, purpose, method, time/duration, trainers and location or situation of a programme or course - all of which are essential in a successful dispensation of manpower training and education.'

The curriculum of learning in Nigeria has been pinpointed with some inadequacies. Dapo-Asaju and Bamgbose (2016) noted that despite the need for improved access to government information in the modern era and the training of librarians who will be able to work in this area of discipline, it is still possible for an aspiring librarian to go through library schools in Nigeria without being taught on the management of government information. This is because the course is not a compulsory course in most universities and unavailable in others.

LIS is a discipline that is rapidly expanding its strategic reach in order to address the various challenges that are emerging within the larger social, political, economic and technological context. Ekoja and Odu (2016) positioned for the infusion of a good entrepreneurship curriculum that is comprehensive, dynamic and responsive to changing needs in LIS. Over the last two decades, many issues have confronted the profession of librarianship, not the least of which has

Address for correspondence:
Oghenere Gabriel Salubi
Department of Library and Information Science,
University of Fort Hare, Alice Campus,
Alice, 5700, South Africa
E-mail: osalubi@ufh.ac.za

been the embedding of the Internet and other digital technologies which has also led to a change in school and degree names.

According to Weech (2005), several LIS schools started responding to the external environment by merging with other academic departments, offering a wide range of new courses, and by placing an increased emphasis on information technology. Society changes and the work of librarians has become more complicated and demanding. Therefore, developing an understanding of the nature of social changes and their effects on librarianship is an important issue for information professionals. Curriculum is a pivotal part of any education system. It is constantly growing and is the complete package students take away from schools.

Objectives of the Study

The aim of this paper was to find out the extent to which the ICT-related component of the LIS curriculum in selected Nigerian library schools reflect the expected skills/competencies sought by heads of academic libraries in South West Nigeria when hiring information professionals and, to suggest recommendations that may be implemented by policy makers especially the Librarians' Registration Council of Nigeria (LRCN) in the development of a more robust LIS curriculum. The following are the specific objectives of the research:

1. Identify the courses that make up the LIS curriculum,
2. Ascertain the skills/competencies that are required of LIS graduates by employers of labour,
3. Establish if the present curriculum is producing librarians with the required ICT-related skills for employment, and
4. Highlight the areas of strengths and weaknesses in the curriculum.

Literature Review

Library and information science education in Nigeria has evolved since the establishment of the first library school in 1959 at the then University College Ibadan now University of Ibadan. The UNESCO seminar of 1953 on the future of public library service provision recommended the establishment of a library school at the University College Ibadan, Southern Nigeria to be funded with a grant from the Carnegie Corporation of New York (CCNY). It began as the Institute of Librarianship in 1959 with trainings leading to the award of certificate of the British Associateship of Library Association (ALA) and Fellowship of Library Association (FLA) but changed to the American style of graduate library training by 1963 (Aina 2007; Nweke 1995).

The Institute ran diploma programme until 1966 when it stopped to admit students except for post-graduate diploma in Library Studies. A second library school was established at the Ahmadu Bello University (ABU), Zaria in 1965 as a result of F.A. Sharr's report on the library needs of Northern Nigeria (Mohammed 2008). This library school was to educate librarians at the undergraduate level as opposed to that of Ibadan's Postgraduate Diploma programme. After the establishment of the first two library schools, other library schools have subsequently opened in over 25 universities across the Country with many of them awarding qualifications up to the PhD level (Igwe 2005) as well as National Diploma (ND) and Higher National Diploma (HND) in Library and Information Science being awarded by many polytechnics.

Although harmonized curriculum is lacking in Nigerian library schools, Oparah, (2006) observed that the newer LIS schools appear to operate modified curricula of the older schools. This certainly has gotten the attention of the Librarians' Registration Council of Nigeria (LRCN) which responded in 2012 by stating that: "It is really x-raying the curriculum on ground to see how to deliver better practice. At the end of day, we will come up with a curriculum that has a robust menu of courses that schools can draw from" (This Day Newspaper 2012). According to Dapo-Asaju and Bamgbose (2016) the Librarianship Registration Council of Nigeria (LRCN) is still in the process of reviewing the library and information studies curriculum which will then regulate the teaching of the course across library schools in Nigeria.

Advancements in the information environment where information and communication technologies serve as the main thrust, has resulted in increasing demands and expectations from the part of library schools across the globe. The demands and expectations are focused on the need for graduates that will remain professionally relevant in the 21st century dynamic information arena (Abubakar and Hassan 2010).

These developments have necessitated the infusion of ICTs in information studies curriculum for apparent reasons including strategy for survival and better information service provision to users. Minishi-Majanja (2007) noted that ICTs are important in the attainment of library and information science educational goals and objectives as well as the fulfillment of the main responsibilities of LIS schools. Therefore, library schools have shifted their attention towards the restructuring of training curriculum so as to accommodate emerging technological developments in the profession. The rapid move towards an information and knowledge-oriented society (Miwa 2006), has called for new competencies by information professionals in order to take advantage of ICTs.

Accordingly, many library schools in universities and colleges have made modifications in their curricula, degree names and school names to highlight contemporary professional practices and training. Information professionals have seen their tasks of collection, organisation, storage, retrieval and dissemination of information (Mêgnigbêto 2007) changed as a result of ICTs and a change in information production to its dissemination thus, requiring new skills and competencies to carry out these tasks. The provision of a suitably equipped and well stocked laboratory that will serve as a clinic for hands-on information practices for student librarians (Uhegbu 2011) will ensure quality information science education and improved quality of libraries with better services.

As observed by Abubakar and Hassan (2010), the enormous upsurge in knowledge which now leads to a new paradigm shift in the Information profession is only a result of the dynamic society where ICTs have taken the centre stage. The development and application of cutting-edge information communication technologies to the profession have impacted positively on the practices and procedures of library service delivery, training and the education of information professionals (Mohammed 2008).

METHODOLOGY

A careful look at existing related literature reveals that content analysis have been previously used in studying the library and information science curriculum and associated topics (Callison and Tilley 2001; Chu 2006). This paper similarly considered content analysis as well as a quantitative survey of employers of labour in academic libraries in two selected States in Southwest Nigeria to find out the skills/competencies they look out for when hiring a librarian.

Data Collection

Data collection for this research involved the identification of LIS master's courses in three selected library schools (University of Ibadan (UI), Ahmadu Bello University (ABU) and Nnamdi Azikiwe University (UNIZIK). A list of the courses that make up the curriculum was extracted from the library schools website except that of Ibadan library school were a brochure containing the curriculum was obtained from the department.

The twenty-eight (28) heads of all the academic libraries in Oyo and Osun States, Southwest Nigeria were sampled for the research. A survey was developed for the heads of libraries and collected data were analysed using descriptive statistical method: frequency, simple percentage and mean scores. Data collection in polytechnics and colleges of education was poor or were not collected at all because of the industrial action embarked upon by the academic staff unions of these institutions which included librarians. A total of twenty (20) copies of the surveys were administered in the two selected States and 15 were retrieved, which represents seventy-five percent response rate.

Rationale for the Selected Library Schools and Curricula

Most employers especially in academic libraries in Nigeria hire only graduates with MLIS degree as librarians. Although the Librarians' Registration Council of Nigeria (LRCN) recognises a Bachelor's degree holder in LIS as a librarian, this is usually not adhered to in most academic libraries in Nigeria. The three library schools were selected because UI and ABU were the first library schools in Nigeria and their curricula has been greatly adopted by other schools (Oparah 2006), and UNIZIK is one of the newest library schools to have gained a proper footing awarding degrees from Bachelors to PhD. Also,

these schools are in different parts of the country; they are federal government-owned universities and are better funded than state government or privately-owned universities.

Content analysis of the selected courses from the three schools listed above was carried out and related courses were put together for this research. Individual courses offered by the three LIS schools were analysed using their course titles, descriptions, and other curriculum-related information showing the compulsory/ core, required and elective courses, and grouped per their subject contents to give a general representation of the LIS curriculum. Two library schools in this research (UI and ABU) have more than one Master's program. For example, ABU offers both MLIS (Master of Library and Information Science) and MSc (Master of Information Management) programmes. In such instance, the curriculum for LIS was considered.

RESULTS

LIS courses in the curriculum are broadly in three parts: compulsory (core), required and elective. The MLIS degree at ABU lasts for a minimum duration of four academic semesters while the same degree is offered for a minimum of three academic semesters at UI and UNIZIK.

As revealed in Table 1, ABU has the highest number of courses (75) because it offers four different masters programmes at the department which have their courses listed on the website. Only (12) are compulsory/required for MLIS students. UNIZIK has the least number of courses with twenty-six (26) in all while eighteen (18) of the courses are compulsory/required.

Table 1: Summary of courses offered

	UI	*UNIZIK*	*ABU*
Compulsory/required	18	18	12
Electives	14	8	63
Maximum number of electives allowed	2	1	2
Total number of courses	32	26	75

Source: Author

Compulsory/Required Courses

According to the curricula, students must take and pass all Compulsory (core) and Required courses with a minimum average mark of 40 and 35 respectively. As LIS course titles often vary from curriculum to curriculum, the course names listed in Table 2 are simply close representations, and may not be the exact wording in a particular curriculum. There are forty-eight (48) compulsory and required courses in all the Library and Information Science offerings grouped for this paper, with UI and UNIZIK offering four (4) courses in Research (Thesis, seminar and statistical methods in LIS) while Internship/Practicum is present in equal proportion across the curricula.

The two courses at UNIZIK library school that are offered at the faculty are research based and are prerequisite for Thesis writing in the final semester as stated in the curriculum. As shown in Table 2, ICT courses are offered more at the UI library school with a total of three while UNIZIK and ABU offer two each.

Table 2: Grouping of compulsory/required courses

LIS courses	*UI*	*UNIZIK*	*ABU*
Organization of Information/Knowledge (including Cataloguing and Indexing)	3	2	2
Reference/Information Sources (information services and user studies)	2	2	1
ICT (Information technologies/ system development)	3	2	2
Management (Collection management, Human resource and Preservation/ Conservation)	3	4	2
Internship/Practicum	1	1	1
Research (Thesis, seminar and statistical methods)	4	4	3
All Other Single Topics (For example: Ethics for information professionals; Information policy; Issues in LIS; Economics and Marketing of Information; Indigenous Knowledge; Introduction to LIS/Information environment)	2	3	1
Total	18	18	12

Source: Author

Employers' Expected Competencies and Skills from LIS Graduates

Here, employers of labour (library heads) were required to give their personal views regarding the competencies and skills that they look out for when hiring a librarian. The aim of the question was to capture employers' varying opinions on qualitative skills they seek for when hiring a librarian. As expected, there will be a difference in emphasis on skills required depending on the nature of the job and responsibilities attached; hence, twenty-four (24) skills (categorised into professional and generic skills) were identified for the research. Respondents were provided with possible options to choose from and asked to rate each on a scale of 1 to 4 (1 = strongly agree and 4 = strongly disagree). The response from heads of libraries is shown in Table 3.

In all cases, levels 1 and 2, and 3 and 4 on the Likert scale were combined to calculate all the responses in the affirmative. Table 3 reveals a total of twenty-four skills (fifteen professional information skills and nine generic skills) that were identified for the paper. Most of the respondents agreed favourably that they look out for these skills when hiring a librarian.

DISCUSSION

Although ABU has the highest number of courses listed, it has the least number of courses that must be taken before a degree is awarded. Choice of two elective courses can be made from the sixty (63) which are compulsory/required courses for the other three Masters programmes at the ABU library school. Table 1 also reveals that a total of twenty (20) courses must

Table 3: Employers' expected competencies and skills from LIS graduates

S. No.	*Expected competencies and skills*	*SA*		*A*		*D*		*SD*		*Mean score*
		F	*%*	*F*	*%*	*F*	*%*	*F*	*%*	
1	Computer and information technological skills	13	86.7	2	13.3	-	-	-	-	1.13
2	Skill for using Internet and computer communication networks	13	86.7	2	13.3	-	-	-	-	1.13
3	Information retrieval skill	11	73.3	4	26.7	-	-	-	-	1.27
4	Traditional classification and cataloguing	10	66.7	5	33.3	-	-	-	-	1.33
5	Indexing and abstracting	7	46.7	7	46.7	1	6.7	-	-	1.73
6	Communication skill	11	73.3	4	26.7	-	-	-	-	1.27
7	Knowledge of Cryptography and Firewall	6	40.0	6	40.0	3	20.0	-	-	2.20
8	Traditional/digital archiving and preservation skill	8	53.3	6	40.0	1	6.7	-	-	2.07
9	Web/blog design skills	7	46.7	5	33.3	3	20.0	-	-	2.27
10	Project management/leadership skills	8	53.3	7	46.7	-	-	-	-	1.47
11	Excellent understanding of library management software and the virtual environment	7	46.7	8	53.3	-	-	-	-	1.53
12	Negotiation skills	6	40.0	9	60.0	-	-	-	-	1.87
13	Research and publication skills	12	80.0	3	20.0	-	-	-	-	1.47
14	Library automation skills	9	60.0	6	40.0	-	-	-	-	1.40
15	Budgeting and library financing skills	9	60.0	6	40.0	-	-	-	-	1.40
16	Cataloguing and indexing using appropriate digital metadata	6	40.0	7	46.7	2	13.3	-	-	1.73
17	Book indexing and abstracting	6	40.0	7	46.7	2	13.3	-	-	2.00
18	Classification skills using appropriate subject classification scheme	9	60	6	40.0	-	-	-	-	1.93
19	Digitization and management of institutional repository using online databases	8	53.3	4	26.7	3	20.0	-	-	2.20
20	Traditional/online reference skills	8	53.3	7	46.7	-	-	-	-	1.73
21	Advanced internet search skills	5	33.3	9	60.0	1	6.7	-	-	1.73
22	Good understanding of electronic security system	6	40.0	5	33.3	4	26.7	-	-	2.07
23	Collection development in an ICT-driven platform	6	40.0	8	53.3	1	6.7	-	-	1.67
24	Application of social media networks to library services	6	40.0	8	53.3	1	6.7	-	-	1.80

Source: Author

be taken by students at UI library school before the degree is awarded while same degree is awarded at ABU library school with a total of fourteen (14) courses. Out of the eighteen compulsory/required courses at UNIZIK library school, two: (Educational Research method and Advanced Educational Statistics) are bearing the Faculty's course codes. A look at the course description shows that they are very important to library and information science research as also emphasised by previous studies (Obaseki et al. 2010; Eze 2016; Saka 2016). A study by Munyoro and Mutula (2016) revealed disparities in the employability competencies integrated in LIS curricula in Zimbabwe. As revealed in Table 3, high competencies in computer and information technology, Internet and computer networks, information retrieval, traditional cataloguing and classification, library management software/virtual environment, research and publication and library automation were highly sought after by employers with a total rating of 100 per cent when levels 1 and 2 on the Likert scale were combined (refer to Table 4 for full list). This result is in line with (Orme 2008) and (Fisher 2004) research findings. This result further reveals that employers look out for 13 out of the 24 skills/competencies that were identified for the research and more than half are ICT related. Also, each of the ICT related skills/competencies listed in this paper were sought after by at least 80 percent of the respondents. This further emphasize the need for these skills to be acquired in library school (Eze 2016).

ICTs have greatly changed the way and manner information is sought, accessed, processed and presented. It has also given information users/seekers unlimited access to a world of information with questionable credibility and source (D'Esposito and Gardner 1999; Ekoja and Odu 2016) and greatly facilitates the acquisition and absorption of knowledge (Tinio 2002). Hence, librarians require modern ICT skills in order to provide effective information service to users. A close look at the curricula does not reflect much presence of what Chu (2006) called "new LIS courses": these are courses that generally did not exist in traditional library and information science curricula before the Information age. A detailed analysis of the course descriptions reveal that two of such courses that exist are "Knowledge Management" and "Information Seeking Behaviour" though with different titles. The course description does not suggest topics such as Website design/Web applications, Cyberspace law and policy, Human computer interaction (HCI)/User-system interaction, XML; JAVA/C/Script languages, Computer supported cooperative work (CSCW) as these are some of the areas that requires librarians' expertise when designing ICT-mediated communication channels in the library. These findings were also stressed by Saka (2016) study of the trends of library and information science education programs.

CONCLUSION

As revealed in the research, the curricula that were evaluated have a weak inclination towards ICTs thereby falling short of expectations of employers' expectations in ICT related skills and competencies. This paper has revealed that the present state of the curriculum could make the profession still to suffer from such concepts as "curriculum digital divide" that is, the difference between a 21st century model curricula where in-

Table 4: Skills/competencies employers of labour firmly look out for before hiring LIS graduates

Professional information skills	*Generic skills*
Computer and information technological skills	Skill for using Internet and computer communication networks
Information retrieval skill	Communication skill
Traditional classification and cataloguing	Project management/leadership skills
Excellent understanding of library management software and the virtual environment	Negotiation skills
Research and publication skills	Budgeting and library financing skills
Library automation skills	
Classification skills using appropriate subject classification scheme	
Traditional/online reference skills	

Source: Author

formation and communication technology courses prevail and those where these courses scantly feature. Complete infusion of ICT application and utilization is still very parallel in developing countries; this is also very evident in the curricula being used by LIS schools in Nigeria.

RECOMMENDATIONS

Since the ICT-related component of the present curriculum does not adequately meet employers' skills and competencies expectations from librarians, the need for a total overhauling to accommodate new changes in the profession cannot be overemphasised. Because ICTs have become the main driving force of the Information profession, MLIS students with first degrees in library and information science may be given the option of taking more practical ICT related elective courses and where this cannot be offered by the library school, provisions should be made for them to be offered from ICT related departments within the university.

Constant innovations in ICTs and changing nature of the information environment, calls for an immediate response to address the gaps being created beginning with the curriculum of training so as to make graduate librarians technologically competent for professional practice. A new curriculum is long overdue as the present curriculum can be adjudged not to support the complete digital readiness of librarians in the 21st century as the gap between what is being taught in LIS schools and employers' expected competencies is getting widened by the day.

REFERENCES

Abubakar BM, Hassan BB 2010. Incorporating information Technology in Library and Information Science Curriculum in Nigeria: A Strategy for Survival in the 21st Century. Library Philosophy and Practice (E-Journal). http://digitalcommons. unl.edu/libphilprac/447. (Retrieved on 12 January 2016).

Aina LO 2007. Appropriate Curriculum for Library and Information Science Schools in Nigeria: The Role of the Nigerian Library Association. *Conference of the Nigerian Library Association*, 9-14 September, Uyo, Akwa Ibom State, Nigeria.

Callison D, Tilley CL 2001. Descriptive impressions of the library and information education evolution of 1988-1998 as reflected in job announcements, ALISE descriptors, and new course titles. *Journal of Education for Library and Information Science,* 42(3): 181–199.

Chu H 2006. Curricula of LIS Programs in the USA: A Content Analysis. *Proceedings of the Asia-Pacific Conference on Library & Information Education & Practice*, 3-6 April, Singapore, pp. 328–337.

D'Esposito JE, Rachel MG 1999. University students' perceptions of the internet/ : An exploratory study. *The Journal of Academic Librarianship*, 25(6): 456–461.

Dapo-Asaju H Seun, Bamgbose OJ 2016. Provision of Sustainable Development Goals (SDG) Information to Nigeria Citizens through a Collaborative Approach: A Proposal. *IFLA General Conference and Council*, 1–8. Colombus, OH: IFLA.

Ekoja II, Odu AO 2016. Developing and implementing entrepreneurship curriculum in Nigerian library and information science programmes. *International Journal of Library and Information Science,* 8(6): 48–53. doi:10.5897/IJLIS2016.0720.

Eze EM 2016. Awareness and Use of Web 2.0 Tools by LIS students at University of Nigeria, Nsukka, Enugu. *Library Philosophy and Practice (E-Journal),* 1(6): 1–20. From <http://digitalcommons.unledu/lgi/viewcontent.lgi/article=3707& context_ lipphitprac> (Retrieved on 2 January 2016).

FisherB 2004. Workforce Skills Development: The Professional Imperative for Information Services in the United Kingdom. *Paper Presented at the ALIA Biennial Conference,* 21-24 September, Gold Coast, Australia.

Igwe UO 2005. Harnessing information technology for the 21st century: Library education in Nigeria. *Library Philosophy and Practice (E-Journal),* 7(2): 1-7. (libr.unl.edu:2000/LPP/lppv7n2.htm)

Mazumdar NR 2007. Skills for Library and Information Professionals Working in Borderless Library. *Proceedings of the 5th Convention Planner,* 7-8 December, Gauhati University, Guwahati. Ahmedabad: INFLIBNET Centre.

Mêgnigbêto E 2007. LIS curriculum in French-Speaking West Africa in the age of ICTs: The case of Benin and Senegal. *The International Information & Library Review,* 39(2): 158–165.

Minishi-Majanja MK 2007. Integration of ICTs in Library and Information Science Education in Sub-Saharan Africa. World Library and Information Congress: 73rd IFLA General Conference and Council, 19-23 August, Durban. From <http://www.ifla.org/IV/ifla7> (Retrieved on 12 November 2008).

Miwa M 2006. Trends and issues in LIS education in Asia. *Journal of Education for Library and Information Science,* 47(3): 167–180.

Mohammed Z 2008. Attracting Students into Library and Information Science Programmes in Developing Countries: The Nigerian Experience. *Paper Presented at 74th IFLA General Conference and Council,* 10-14 August, Quebec, Canada.

Munyoro P, Mutula S 2016. Library and information science education and training in Zimbabwe and the paradigm shift in the information industry. *African Journal of Library, Archives & Information Science,* 26(2): 131–144.

Nweke KM 1995. Education for information in Nigerian library schools: An overview of the Joint Ad-

mission and Matriculation Board (JAMB) requirements for admission to first degree programs. *Journal of Education for Library and Information Science*, 36(3): 265–271.

Obaseki TI, Ibrahim SD, Momoh JN 2010. Scientific Research in Librarianship: A Panacea for Library Development in Nigeria. *Library Philosophy and Practice (E-Journal)*, 13(2): 25-32. From <http://digitalcommons.unl.edu/gi/viewcontext.lgi;article=14482context=libphilprac> (Retrieved on 12 January 2016).

Ocholla DN 2013. Review and Revision of Library and Information Science Curriculum in a South African University and the Usage of Follow-up Study and Advertisement Scanning Methods. Proceedings of the Annual Conference of CAIS/Actes Du Congrès Annuel D, 6-8 June, Canada. From <http://www.cais-acsi.ca/ojs/index.php/cais/article/viewFile/67/202>.

Oparah UN 2006. Integration of ICT in the Reference services curricula of Nigerian library and information science schools. *Information Technologist*, 3(1): 27–35.

Orme V 2008. You will be…: A study of job advertisements to determine employers' requirements for LIS professionals in the UK in 2007. *Library Review*, 57(8): 619–633. doi:http://dx.doi.org/10.1108/00242530810899595.

Saka KA 2016. Trends in Library and Information Science Education Programs. *International Conference on 21st Century Education*, 13-15 November, Dubai.

Siddiqui S, Walia PK 2013. A Comparative Analysis of Library and Information Science Post Graduate Education in India and UK. Library Philosophy and Practice (E-Journal), 16(2): 18-25. From <http://digitalcommons.unl.edu/libphilprac/941. (Retrieved on 16 January 2016).

This Day Newspaper 2012. New Library Science Curriculum for Varsities, Underway. This Day Newspaper, Abuja. From <http://www.thisdaylive.com/articles/new-library-science-curriculum-for-varsities-underway/125358/> (Retrieved on 16 January 2016).

Tinio VL 2002. ICT in Education. From <http://www.apdip.net/publications/iespprimers/eprimer-edu.pdf> (Retrieved on 1 JFebruary 2016).

Uhegbu AN 2011. Quality library and information science education in Nigeria The place of public–private collaboration. *IFLA Journal*, 37(3): 228–234.

Weech T 2005. Analysis of Courses and Modules: Education for Digital Librarianship. Digital Library Education, 24-25 March, Villa Morghen, Firenze. From <http://dspace-unipr.cineca.it/bitstream/1889/482/1/Weech.pdf> (Retrieved on 1 February 2016).

Paper received for publicaiton on August 2016
Paper accepted for publication on December 2016