Integration of Information and Communication Technology (ICT) to the Library and Information Science Curriculum: The Practicum in Library Schools in Rivers State

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ARTICLE INFO

ABSTRACT

The study investigated the Integration of Information and Communication Technology (ICT) to the Library and Information Science Curriculum: The Practicum in Library Schools in Rivers State. Descriptive survey design was used with a population 374 comprising 21 LIS educators and 353 Four Hundred Level Library and Information Science Students from University of Port Harcourt, Rivers State University, Port Harcourt, and Ignatius Ajuru University of Education Port Harcourt. Census sampling technique was used to select the LIS educators and purposive sampling technique was used to the select the Four Hundred Level LIS students. Questionnaire and checklist were used for data collection. 90% and 97% responses were found valid for analysis for LIS Educators and LIS students respectively. The study was analyzed using mean rating, standard deviation and simple percentage. The study revealed that ICT courses were integrated into LIS curriculum in Library schools in Rivers State but LIS educators lacked the ICT skills to teach ICT practicum consequently, the students were not properly taught ICT practicum. However, students had positive perception of ICT practicum. Notwithstanding, lack of ICT skills, poor policy implementation, lack of state-of-the-art infrastructure and nonchalant attitudes of staff towards the adoption of ICT constituted the challenges faced in the implementation of ICT practicum. The study therefore, recommended that the management of library schools in Rivers State should implement ICT practicum by hiring competent staff maybe from computers science department to teach the practicum for the interim. Subsequently, recruitment of librarians should include strictly ICT compliant.

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1. Introduction

Library and Information Science (LIS) is a discipline or field of study responsible for the education and formal training of the specialized personnel needed to manage library and information centres. The practice of library and information science discipline generally regarded as librarianship involves managing information resources in all branches of knowledge. Omehia (2019) noted that library and information science education as a field of study focuses on equipping learners with information collection, classification, manipulation, storage, analysis, interpretation and dissemination skills including skills in teaching information literacy skills to learners. It is expected to prepare and equip professionals with needed skills and knowledge required to work in any libraries upon graduation. This discipline is studied in higher institutions including universities and polytechnics all over the world and is also known as Library and Information Science (LIS) Schools, therefore, LIS Schools or Department of Library and Information Science is found in universities and associated institutions of higher learning that offer LIS programmes (Nnadozie, 2017). Due to its interdisciplinary nature, the LIS curriculum draws from other subject areas in order to expose librarians to the skills and competencies required to function effectively in an increasingly competitive environment.

However, the unexpected change in the information needs and information seeking behaviour of the society influenced and facilitated by the rapid development and proliferation of information and communication technology (ICT) has influenced librarians' mode of service delivery and the pattern of training of potential librarians who are expected to be ICT savvy and complaint. Consequently LIS programmes and curriculum have undergone several modifications as researchers have criticized the curriculum as not meeting the current job market and not corresponding to the variation in the nomenclature, Library and Information Science and library and information technology. Researchers such as Nsirim and Igwela (2018) stated that variations in the names of the LIS programme, which students find confusing and at times present a challenge to prospective employers as well as LIS curricula which are not in tandem with the job market. Also, Nnadozie (2017) noticed that from the initial name as 'library economics', it has at various times been known as 'library studies' and 'library science'. It was further opined that even the current name as Library and Information Science is no longer invoke the face of emerging realities. Hawabkeh (2016) had noticed that some departments have changed the name of their programme from library and information science (LIS) into Information Science (IS) whereas others had to modify their curricula by incorporating ICT courses into their curricula and programs.

Nnadozie et al. (2017) had advocated for the change of nomenclature from Library and Information Science to Information and Knowledge Management (IKM). Their grievances were drawn from the current state of library and information science which seems to be reluctant in embracing emerging trends and technologies. They aligned their grievances with the position of National Universities Commission (2014) which posited that present LIS programme as offered in Nigerian universities aimed at training librarians for library-related jobs only which is narrow approach and does not take cognizance of various subsidiaries and emerging opportunities in information and knowledge-driven economy. Furthermore, this situation limits employment opportunities for products of LIS programmes, especially, in environments characterized by fierce completion for recognition,

as well as scarce job vacancies. Consequently, career seekers do not take much pride in opting for library and information science. It is regrettable to state that most students do not choose to study library and information science as a result of the library attached to it and their perception about library workers. Nnadozie et al. (2017) have agreed to this by stressing that the change of nomenclature from library and information science to Information and Knowledge Management would attract career seekers to librarianship and would change the image of librarianship. However, the authors of this work agree to the change to nomenclature, they insist that nomenclature change is not the actual problem but the manner of services and the adoption of ICT to meet up its claim as being technologically inclined. The authors believe that if ICT is fully integrated and utilized effectively and the services are enhanced to meet the information needs of the contemporary society in digital age, it would be appreciated and the issue of nomenclature may not come in the way. Therefore, implementation of ICT practicum is imperative to the future of library and information science.

In order to resolve this anomaly, the Librarians' Registration Council of Nigeria which is a professional body responsible for development of curriculum as come up with a curriculum that is hoped to equip potential librarians with the skills necessary to meet the current information demands of the society. This curriculum has in its course contents ICT related courses. Notwithstanding, ICT can impact students learning when teachers are digitally literate and understand how to integrate it into curriculum by practical application. This is because technological skills have become essential requirements for students to survive in the evolving world of information because the practical knowledge would give them competitive advantages in the job market. Hence, the necessity of the integration of ICT courses in LIS programs.

Regrettably, Adebayo, and Alex-Nmecha (2019) expressed displeasure that the current educational methods being used in the educational process of librarians were more of theory-based than practical; an approach that may not aid knowledge retention in LIS students while being faced with the realities of constant changes in academia. Similarly, Ogwo (2021)confirmed that the current education system in most developing countries, Nigeria in particular is majorly theoretical rather than practical which inadvertently result in the production of half-backed graduates who do not have the skills and competences required in the workforce. It therefore imperative to investigate ICT practicum in library schools in order to determine the implementation of ICT integrated course into the LIS curriculum through practical teaching.

2. Statement of the Problem

The development and the proliferation of ICT, resulting from its benefits in virtually every human endeavor, particularly in teaching and learning has influenced its application and integration into many courses in education. Thus, ICT has been integrated into LIS education through the Librarians Registration Council of Nigeria which is a professional body responsible for the development and modification of LIS curriculum. This is driven by electronic networks, growing application of ICT and innovative technologies in library service delivery as ICT enhances and promotes library service

delivery, saves the time of the users and keeps librarians relevant in the rise of various information services providers like the bloggers, some of which their information services are misleading. Although, ICT courses have been integrated into the LIS curriculum for librarians to remain in the 21st century, regrettably students are mainly exposed to the theory based ignoring the practical application of the ICT. This is deceitful based on the improved roles of librarians and the nomenclature, library and information science which claims to be digitally inclined and integrated as well as posing challenges to librarians in the face of job recruiters that could see them as not meeting up to expected. It is therefore not enough to integrate ICT courses in library and information science curriculum, it is equally necessary to implement ICT practicum in library schools. Although studies have shown that LIS is more of theory-based rather than practical application, there is no known study to the researchers' knowledge with empirical evidence on Integration of Information and Communication Technology (ICT) to the Library and Information Science Curriculum and its practicum. Thus the need for this study.

3. Objectives of the Study

The main objective of the study is to investigate the Integration of Information and Communication Technology (ICT) to the library and information science curriculum and its practicum in library schools in Rivers State. The specific objectives are to:

1) Identify the ICT courses in LIS curriculum taught at library schools in Rivers State
2) Determine LIS educators' skills in teaching ICT practicum in library schools in Rivers State
3) Investigate the extent of practical ICT training provided to students in Library schools in Rives State
4) Unravel the perceived impact of ICT practicum on LIS students in Library schools in Rivers State
5) Discover the challenges faced in the implementation of ICT practicum in library schools in Rivers State

4. Research Questions

1) What are the ICT courses in LIS curriculum taught at library schools in Rivers State?
2) To what extent are LIS educators' skilled in teaching ICT practicum in library schools in Rivers State?
3) What is the extent of practical ICT training provided to students in Library schools in Rives State?
4) what are the perceived impact of ICT practicum on LIS students?
5) what are the challenges faced in the implementation of ICT practicum in library schools in Rivers State?

5. Review of Related Literature

Abubakar (2010) investigated Information and Communication Technology (ICT) knowledge and skills amongst the students of library and information science in Umaru Musa Yar'adua University, Katsina, in order to ascertain whether the courses taught in the department were adequate enough to provide students with ICT knowledge and skills, whether there were adequate ICT infrastructures needed for students training and whether the students had adequate knowledge and skills on ICT. The study revealed that the department had adequate ICT courses integrated into the curriculum and also had adequate ICT infrastructures. The study further revealed that students of the department did not have significant knowledge and skills on search engines, computer applications, e-resources as well as media resources. The study recommended that the department's information technology and audio visual laboratories should be more functional by providing laboratory attendants and practical hours in the departmental lecture time table. The department should review its curriculum to include more ICT related core courses.

Abbas and Siddique (2020) studied ICT Competencies among University Library Professionals of Punjab, Pakistan A quantitative method was used and a self-administrated questionnaire distributed among 206 university library professionals working in Punjab through google form, and email. Collected data was analyzed through the Statistical Package for Social Sciences (SPSS). The findings revealed that most of the LIS professionals had advance level competencies in library management systems, simple searching techniques. They also possessed moderate skills in basic hardware and software installation and required computer programming skills, Linux OS and cloud computing.

Al-Shwabkah et al. (2016) investigated undergraduate students' perceptions of teaching information and communication technology (ICT) courses in the library and information science (LIS) program in Jordanian universities. Quantitative methods were adopted. A questionnaire with 40 items was distributed on a stratified random sample of 220 students from four LIS departments in Jordan and, of whom, 203 responded with a response rate of 92.3 per cent. The study showed that teaching ICT courses was considered very important thus the need for integrating ICT courses in LIS curriculum. It was also suggested that the staff skills and efficacy should be improved as to enhance teaching methods. However, the students felt the curriculum content, the teaching pedagogy and methods were on an average level. The study further revealed that the resources and facilities necessary to teach ICT courses were available and adequate. Shastri and Chudasma (2021) investigated the perception of ICT skills and challenges of usage of technologies among the library professionals of the Gujarat State during the COVID. The study showed that most of the respondents perceived the application of ICT to be beneficial to library works and necessary to provide quality library services.

Wiche (2021) investigated library and information science education in the 21st century: the challenges of LIS educators in library schools in Rivers State. Descriptive survey design was used with a population of 45 LIS educators in library schools in Rivers State. Census sampling technique was used to select all the respondents and questionnaire was used to gather the data which was analysed using mean scores. The findings of the result showed that lack of state-of-the-art infrastructure, lack of instructional aids, nonchalant attitude of educators towards the use of ICT tools in teaching, inadequate skills to apply the needed teaching methods, students attitude towards learning, poor

curriculum development and divergent name of LIS profession were the major challenges that affected LIS educators. It was therefore recommended among others the deployment of the state-of-the-art infrastructure, support to conferences and a policy that will mandate all educators particularly LIS educators to leverage the modern methods in LIS education

6. Methodology

Descriptive survey design was used with a population 374 comprising 21 LIS educators and 353 Four Hundred Level Library and Information Science Students. The distribution of the population is as follows: University of Port Harcourt (7 LIS Educators and 43 Four Hundred Level LIS students), Rivers State University, Port Harcourt (8 LIS educators and 226 Four Hundred Level LIS students) and Ignatius Ajuru University of Education Port Harcourt (7 LIS educators and 84 Four Hundred Level LIS students).

Table 1. Distribution of Population of the Study

Library School	LIS Educators	LIS Students (400L)	Total
University of Port Harcourt	7	43	50
Rivers State University, Port Harcourt	8	226	234
Ignatius Ajuru University of Education Port Harcourt	8	84	92
Total	**23**	**353**	**376**

Census sampling technique was used to select all the LIS educators and purposive sampling technique was used to the select the Four Hundred Level LIS students because they have passed through all other levels thus, are more experienced to provide answers on the courses taught. Questionnaire and checklist were used to gather the data. Each of the items on the questionnaire was assigned a 4-point rating scale of Very High Extent (VHE)-4 points; High Extent (HE) – 3 points; Low Extent (LE) – 2 points; and Very Low Extent(VLE) - 1point. Out of 21 copies of the instrument distributed to LIS educators, 19 were found valid and out of 353 distributed to the students, 345 were found valid for analysis. The checklist used was the various departmental handbook where all the courses including ICT courses were contained. The result of the study was analysed using mean rating and standard deviation. The real limits of numbers of mean rating are; 3.50-4.00 = Very High Extent (VHE), 2.50-3.49 = High Extent (HE) 1.50-2.49= Low Extent (LE), and 1.00-1.49 = Very Low Extent (VLE) was used to interpret the results.

7. Findings and Discussion

Although the curriculum in the library schools are still being updated as at the time of this

study, table 1 above shows that the library schools in Rivers state are integrated with ICT courses required to enable potential librarians function effectively in the cyber space.

Table 2. ICT Courses in LIS Curriculum taught at Library Schools in Rivers State

UNIPORT	RSU	IAUE
100 Level		
LIS 103.1: Introduction to Library Automation **LIS 104. 1: Information Technology I: Basics and Application** **LIS 112.2: Computer Application to Library (Basic Computer Skills)** **LIS 113.2: Information Technology II: Fundamentals of Internet**	**LIS 142:** Introduction of ICT to Library and Information Services	**LIS 112:** Introduction of ICT to Library and Information Services
200L		
LIS 205.1: Management of Electronic Resources **LIS215.2: Introduction to Network System**	**LIS 215:** Multimedia application in library and information centres **LIS 230:** Introduction to Information Systems **LIS 234:** Internet and Information Searching I	**LIS 212:** Multimedia application in library and information centres **LIS 223:** Use of Computer in Library Practices
300 Level		
LIS 306.1: Database Management System	**LIS 329:** Management of Digital Libraries **LIS 337:** Database Design and Management **LIS 354:** Internet and Information Searching I	**LIS 321:** Internet and information searching
400 Level		
LIS 411.2: Digital Libraries	**LIS 442:** Web Technologies **LIS 446:** Library Automation	**LIS 421:** Web Technologies

The result from table 3 shows that to a high extent, LIS educators could confidently teach the application of information retrieval (2.7), integrated library system (2.6) and library automation and networking (2.5). On the other hand, it is to a very low extent that most of the respondents could teach the practical application of database management systems (2.3), web design (1.3) programming (1.3) and software development (1.1). The weighted mean of 1.9 indicates that the ICT skills of LIS educators in teaching ICT courses in library schools in Rivers State are to a very low extent. However, this result is consistent with that of Abubakar (2010)on Information and Communication Technology (ICT) skills which revealed that students did not have significant knowledge and skills on computer applications. On the other hand, the study is at variant with that of Abbas and Siddique (2020) on ICT competencies among University Library Professionals of Punjab and discovered that most of the LIS Professionals had advance level competencies in library management systems, simple searching techniques and moderate skills in computer programming.

Table 3. LIS educators' skills in teaching ICT practicum in library schools in Rivers State

S/N	I can confidently teach the practical application of:	x̄	±	Decision
1	Web design	1.3	1.4	VLE
2	Programming	1.3	1.4	VLE
3	Information retrieval	2.7	2.6	HE
4	Library Automation/Networking	2.5	2.5	HE
5	Database management systems	2.3	2.4	VLE
6	Integrated Library System	2.6	2.6	HE
7	Software development	1.1	1.2	VLE
	Weighted Mean	1.9	2.0	VLE

The result from table 4 shows the extent of practical ICT training provided to students in library schools in Rivers State. It shows that only item 4 (information retrieval training) was provided to a low extent and all other items 5, 6, 7, 8, 2 and 1 were provided to a very low extent. The weighted mean of 1.9 indicates that ICT training provided to students in Library schools in Rives State was to a very low extent. This implies that the method of teaching in library schools in Rivers State was still more of theory based than practical. This is in congruent with the observation of Adebayo and Alex-Nmecha (2019) who rightly observed that the current educational methods being used in the educational process of librarians were more of theory-based than practical.

Table 4. Extent of practical ICT training provided to students in Library schools in Rivers State

S/N	To what extent are you trained on:	x̄	±	Decision
1	Web design	1.0	1.0	VLE
2	Programming	1.2	1.3	VLE
4	Information retrieval	2.4	2.6	LE
5	Library automation/networking	2.3	2.3	VLE
6	Database management systems	1.9	2.0	VLE
7	Integrated Library System	2.2	2.3	VLE
8	Software development	1.3	1.3	VLE
	Weighted Mean	1.7	1.9	VLE

The result from Fig. 1 shows the perceived impact of ICT practicum on LIS Students and revealed that ICT training according to the students could enabled the students to be competent in the use of ICT tools (100%), effectively and efficiently render services with emerging technologies (100%), be digitally literate (100%), be self-employed (90%) and cope with the current job market (89%). This implies that ICT training is perceived to have a positive impact on LIS students in library schools in Rivers State. This study corroborates with the study of Shastri and Chudasma (2021) on the perception of ICT skills and challenges of usage of technologies among the library professionals of the Gujarat State during the COVID and showed that most of the respondents perceived the

application of ICT to be beneficial to library works and necessary to provide quality library services.
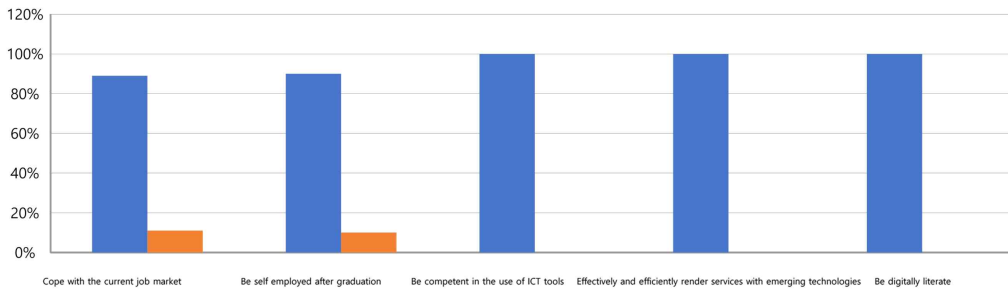

Fig. 1. Perceived impacts of ICT practicum on LIS students

The result from Fig. 2 shows that the challenges faced in the implementation of ICT practicum in the curriculum are lack of ICT skills (85%), poor policy implementation (82%), lack of state-of-the-art infrastructure (80%) and nonchalant attitudes of staff towards the adoption of ICT. On the other hand, most of the respondents (84%) disagreed that nonchalant attitudes of the students towards the adoption of ICT was a challenge. This could be due to students' familiarity with ICT tools and their interest in learning more. However, this study is consistent with that of Wiche (2021) who investigated the challenges of LIS educators in the 21st century in library schools in Rivers State and discovered that lack of state-of-the-art infrastructure, nonchalant attitude of educators towards the use of ICT tools in teaching, inadequate skills to apply the needed teaching methods were the major challenges that affected LIS educators.
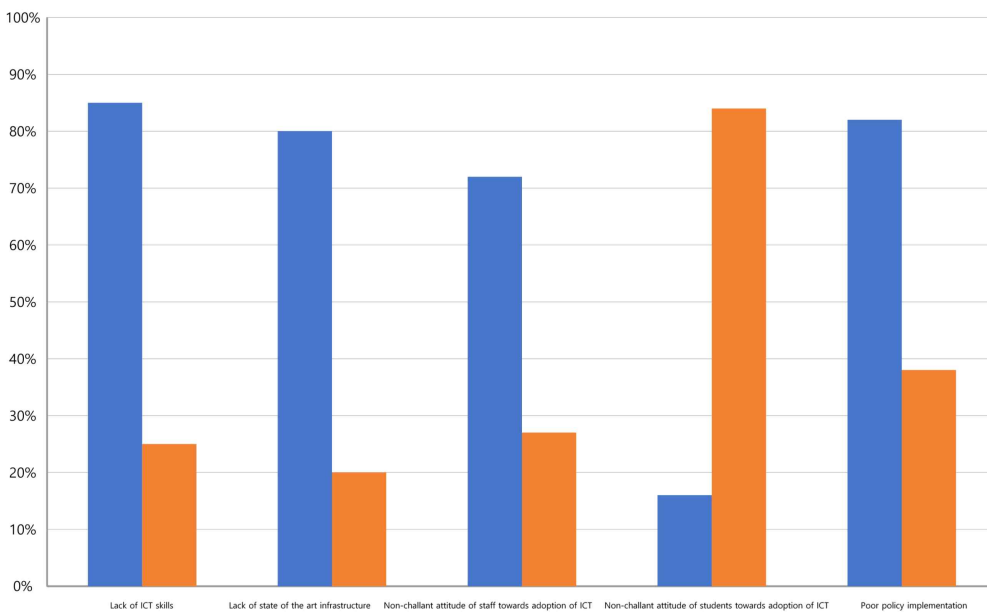

Fig. 2. Challenges faced in the implementation of ICT practicum in the LIS curriculum in Rivers State

8. Conclusion

The evolutionary transformation in LIS Schools culminated by the developments in Information and Communication Technologies (ICTs) and information overload influenced the change in LIS curriculum to meet the information needs of the 21st century information seekers. The 21st century information is high technology driven and the activity of it has to correspond thus, LIS schools have integrated ICT courses into the curriculum without implementation of it practicum. This is confirmed by this study which revealed that ICT have been integrated into LIS courses in library schools in Rivers State but most LIS educators lacked the skills to teach the practical application and could not train students properly on the practical application of ICT as embedded in the course contents. However, it was perceived that ICT practicum is implemented in LIS schools in Rivers State, it could prepare LIS students for the current job market and enable them render effective services using emerging technologies. When this is the case, the issue of nomenclature change may not come in the way as career seekers may be much attracted to embrace LIS profession. Therefore, the study concludes that the implementation of ICT practicum is imperative to the future of library and information science.

9. Recommendations

Based on the findings of the study, the following recommendations were made:
1) The management of library schools in Rivers State should implement ICT practicum. For the interim, this can be done by hiring competent staff maybe from computers science department to teach the practicum. The recruitment of librarians should strictly include ICT compliance.
2) Library schools should as a matter of policy, implement the training of LIS educators on ICT practicum.
3) LIS educators, particularly those teaching ICT related courses should develop themselves on ICT practicum as embedded in LIS curriculum by going for ICT training.
4) Librarians' Registration Council of Nigeria should always update LIS curriculum to meet the realities of the contemporary society.

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