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Transforming Students' Knowledge of Librarianship through Library and Information Science Education in Universities: A Case Study

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ABSTRACT

This is a study on transforming Students' Knowledge of Librarianship through Library and Information Science Education, (LISE). The main objective of this study is to find out current library and information science educational procedure as to determining how it holistically prepare potential librarians towards the changes in librarianship as a result of the birth of ICT. The research employed a descriptive survey design with a sampled population of 980 LIS students. In analyzing the data, SPSS output format based on simple frequency count and percentage distribution, mean and standard deviation was used. The result of the study prove that there is low awareness among LIS students on emerging topics in LIS for the transformation of the academic society and that teaching pattern is mainly theory than both. The result also shows that there are modern facilities but there are no RDA toolkits, functional ICT laboratories and effective internet services. The study also discovered that there is no room for students to evaluate their lecturers neither are the three domains in education generally considered in the final evaluation of students

Key words: Transformation; Librarianship, Library and information science; Education, Curriculum, Students

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1. INTRODUCTION

1.1. Background of the Study

The sole aim of librarianship is to provide the needed information to library users and by extension, the society. Working with the above assertion, for potential librarians to meet up with these professional roles and responsibilities, there is the need for a total blending of will be librarians as to properly understand the concept and practice of librarianship, and can only be achieved if there is a holistic transformation of such students' knowledge of librarianship through formal trainings.

As potential information providers, would be librarians can only succeed in playing the role expected of them in a changing world, if they are also trained alongside the changes, which implies transforming their knowledge of what is expected of the profession through library and information

science education prepared in line with the global changes in information needs and dissemination. Knowledge according to Oxford Advanced Learner's Dictionary (2015) is the information, understanding and skills you gain through education. Transformation on the other hand, refers to the process of changing things totally. The concept could be seen as the ability to produce ideas that are capable of changing the major elements of existence. Transformation is a manifest of insights which is borne out of creation of new things by means of experience, interpretation, and even evaluation of challenges encountered in the past. Considering the definitions of knowledge and transformation therefore, transforming students knowledge in librarianship will simply means imparting information, skills and understanding of librarianship through carrying out gradual alterations and refinements over a period of time in order to discover a better, improved, and readily accepted ways of doing things

If one looks at what constitutes librarianship, one can deduce that librarians by training are moulded and equipped with the technique of how to acquire, process, organise, store and disseminate the needed information to the community. They are also provided with the skills to provide services that meet the needs of the community through information education, preservation of cultural heritage and recreation. The above skills can only be obtained through LISE. LISE in Nigerian Universities have a great deal of autonomy regarding their curricula and are only reviewed based on available fund. In Nigeria, Library and information Science Education is controlled by National University Commission (NUC) whose main vision is: To be a dynamic regulatory agency acting as a catalyst for positive change and innovation for the delivery of quality university education in Nigeria and functions as: Granting approval for all academic programmes run in Nigerian universities; Granting approval for the establishment of all higher educational institutions offering degree programmes in Nigerian universities; Ensure quality assurance of all academic programmes offered in Nigerian universities; and Channel for all external support to the Nigerian universities. and Librarians Registration Council Nigeria (LRCN) whose mission is: To pursue the attainment of professional excellence by determining who are librarians; set standard of knowledge and skills required for registration and practice; guidelines for accreditation and minimum standards for libraries, and maintenance of professional discipline among librarians and mandate as: Determine the level of knowledge and skill required to be a librarian and Set and maintain standards for all categories of libraries by maintaining discipline within the LIS profession (NUC, 2020 and LRCN, 2019)

All LIS education and training programmes in Nigeria follow a common curriculum, developed in collaboration with university faculty staff as directed by NUC the sole body that is responsible for programme accreditation in any Nigerian university. On the other hand, education in librarianship had its debut in SE Nigeria in 1983 when the Department of Library Science, as it was originally known, was created in University of Nigeria, Nsukka as a response to repeated calls for more training opportunities for library and information professionals in the region. Subsequent changes in the name of the Department and degree nomenclature (from B.A.L.S/B.Sc.L.S. to B.L.I.S.) were effected to reflect current trends

It is believed that a society that is not well informed remains under-developed. To this end, a certified librarian no matter where he finds himself is expected to provide the desired information that can

touch and change the community for good. In the Nigerian context, much is expected of the librarians in a community that is surrounded by uncertainty and requires tremendous transformation. The crux of the matter is that the academic society is the most wanted area for this transformation as the centre of learning, research and character building. There is therefore this need for library and information science education to be tailored towards preparing would-be librarians with the desired skills and knowledge as to be relevant in this dynamic world.

1.2 Statement of Problem

In today's world the traditional librarians who are seen as mere organizers and custodians of knowledge have been relegated to the background as they are seen to be irrelevant in a world of emerging technologies. This is built on the premise that information is power and an informed society is a developed society. The implication is that information plays prominent roles in the transformation of every society. Suffice it to say, that the environment in which the librarians operate is so dynamic and the 21st century is as significant as it is being driven by digitalization and electronic working spearheaded by information and communication technology (ICT). The societal change which also affected library and information science definitely calls for a paradigm shift in the education and skills acquisition of potential librarians. For the librarians of today and tomorrow to remain relevant and contribute meaningfully in the transformation of the academic society and Nigeria's societies, vis-a-vis the world, there should be a total overhauling of the educational curricula of library schools as to enhancing effective training of potential librarians.

A critical analysis of literature reviewed, observations, and interactions with undergraduate of library and information science revealed that students are not aware of emerging topics in their field of study; it revealed also that the current educational process and training are mainly theory-based than practical. A study by Anderson (2007) in Australia stipulates that LIS education programmes are blamed for producing graduates who lack the requisite skills to function effectively in the society. In the United States of America, Moran and Marchionini (2012) confirm this criticism, asserting that LIS graduates fail to meet the immediate needs and requirements of current LIS work environments. The general criticism has heightened pressure on LIS education and training programmes globally to empower graduates with generic skills enabling them to contribute to their future places of employment and 'perform successfully as citizens in the knowledge economy. Furthermore, there is this critic of decay in modern infrastructure and equipment for training librarians as obtained in advanced countries and students are only evaluated by terminal examinations divulged of any form of practical. This situation was also exposed by Munyoro (2014) in his study that LIS education and training programmes in most countries of Africa have not significantly responded to changes in the profession, in wider society, and in higher education globally, by reviewing and updating. Virkus (2012) points out that a curriculum is the best barometer for measuring changes in the profession and in society at large. Burnett (2013) concludes that LIS curricula in Nigeria are out-dated and of only limited use in today's transient work environments. The criticisms suggest a widening gap between the needs of society and LIS education and training systems. There is, therefore, an urgent need for

an in-depth empirical study into the quality of LIS education as to defining the gaps in LIS curricula and suggesting ways of empowering students so as to fulfil the demands made on graduates as academic society transformation agents.

If the problem under study is not addressed, LIS education and training programmes will stray from their principal mission of producing skilled human capital for the society and the profession. The relevance and ultimately the survival of the LIS as an academic discipline are, in other words, under threat It is the consideration of the above challenges that this sort of study becomes necessary with the aim of investigating library and information science education and how it can transform students knowledge of librarianship in universities

1.3. Scope of the Study

The scope of this study is all accredited universities in the South East Nigeria offering library and information science at undergraduate levels (100 – 400 level). The universities include: Abia State University, Uturu (ABSU); Imo State University, Owerri (IMSU); Nnamdi Azikiwe University, Awka (NAU) and University of Nigeria, Nsukka (UNN).

1.4. Objectives of the study

The specific objective of this study is to establish how library and information science education can contribute in transforming Students' Knowledge of Librarianship**.** Generally, the objectives are to:

1. Determine library and information science students awareness of emerging topics in librarianship.
2. Identify educational processes being used in the training of library and information science students.
3. Evaluate educational infrastructure and equipment that are available for the training of library and information science students,
4. Identify the methods by which library and information science are being evaluated**.**

1.5. Research Questions

The present study seeks to address the following research questions:

1. Are library and information science students aware of emerging topics in librarianship?
2. What educational processes are used in the training of library and information students?
3. What educational infrastructure and equipment are available for the training of library and information students?
4. What methods are used in evaluating students of library and information students?

2. Literature Review

Librarianship as a profession that is skilled in the knowledge, arts and science of the organisation, preservation and dissemination of recorded information has a prominent roles to play in the transformation of any society. According to Business Dictionary (2019), transformation from an

organisation context is a process of profound and radical change that orients an organisation in a new direction and takes it to an entirely different level of effectiveness. Transformation therefore implies a basic change of character and little or no resemblance with past configuration or structure. This implies that for librarians and libraries to contribute meaningfully in the transformation of any academic society, there must be a paradigm shift on the way professional librarians are to be trained. This means educational activities being used for training of library and information science students in such society have to be explored to meet up with the constant changes in the environment. Mills, Campana and Goldsmith (2017), also shared the above thought as they posit that in the face of changing landscape of information services, library and information science education can push the field of librarianship forward by adopting research based frameworks that are directly applicable to the profession. The above suggests that the traditional theoretical methods of training librarians are not in tandem with the changing environment.

The study of Kacunguzi and Samuel (2016), which assessed Nigeria and Uganda's Library and information programmes in meeting the demand of the digital age, reported that library and information science as a discipline in Africa is continuously struggling to keep up with diverse platform through which it can satisfy the demands of the job market. In the study, four LIS programmes in East and West African countries were assessed in order to know if they align with the professional demands of librarians in the changing information environment. With a comparison similar to LIS programmes in the US, the final analysis shows that all the four programmes considered in Nigeria and Uganda were not adequately inclusive; the schools in Nigeria were even far from achieving digitally attractive library curricula. The study recommended that Nigeria needs to improve on the technology and electronic information management contents of their curricula to replicate the 21st century skills required of librarians. In the same vein, Nalumaga (2016) carried out a survey on trends and development in information schools (ischool) in Africa. The report shows that the movement from traditional library schools to ischools reflects a revised approach towards librarianship and information technologies. The report also revealed that an examination of library and information schools across Africa indicates that only one has formally adopted the ischool perspective. This submission explains that there is urgent need for changes in the infrastructure; curriculum, contents and process of LIS education for the transformation of academic society. Stating the obvious, for some institutions, embracing a modern identity and disciplinary approach, may be a matter of survival knowing that man is susceptible to change.

According to Kaluli and Mutula (2017), the redefining of library and information science education and training in Zimbabwe is structured to close the workforce skills gap. In their study, they identified gaps in knowledge as well as in functional and generic employability training in LIS curricula. The gaps according to them are connected to the transient environment in which LIS departments operate; outdated educational models; shortage of well developed multi-stakeholders, mutual partnership and alliance; an expanding labour environment and absence of continuous professional development programmes. From the result, one can deduce that not only Zimbabwean, but African LIS education

programmes as a whole need a holistic transformation through the adoption of innovative education models that can meet the dictates of the techno-economic standard that serves today's society. One can also conclude from the submissions that there is need for the training of academic librarians to align with the modern changes in the academic society.

Lowden et al., (2011) suggested that multidisciplinary competencies such as project management, communication and presentation, pedagogy and skills related to technology, business, planning, designing and general management are integral to efficient work flows and service provision in the transitory LIS labour environment. Pettigrew (2013) and Gibbs et al. (2011) shifted the focus from multidisciplinary abilities to the need for knowledge of information ethics. According to these authors, LIS professionals need to have an in-depth understanding of information- related laws and ethical issues pertaining to intellectual property rights (IPR) such as copyright laws, information access, rights to information, privacy protection and open access. The Economist Intelligence Unit (2014) report for the British Council stirred the focus of the discourse to technical skills associated with specific jobs. The remark is that LIS professionals must be able to tell the library's story through various media-writing, photography, audio and video. Partridge et al. (2010) also shared this view, arguing that LIS work environments require librarians with well-developed functional skills for the use and application of information technology in library operations, to compare, evaluate and select technologies and software, translate print-based services to electronic services, design and manage websites, engage with and use technology to accomplish professional tasks.

In his study of the past, present and future of LIS education in Anglophone Africa from colonial period to the present, Otike (2017), discovered that earliest schools were initially known as library schools and later changed to LIS schools after independence. The curricula were based on programme prevailing in the mother countries. They further exposed the fact that LIS schools are rapidly increasing all over the continent but noted that if not checked could have a severe consequences on the quality of graduates being produced. He concluded by saying that LIS schools need to match the rapid changes taking place in the information industry and societies with process of preparing and producing information professionals. The nature of employability skills in today's labour environments is indicative of the radical changes taking place in the world and related to the techno-economic paradigm serving contemporary society. This techno-economic paradigm demands a workforce with multidisciplinary expertise, highly developed functional skills and a myriad of personal attributes (Munyoro, 2014). To facilitate the development of such competencies and qualities in library science graduates, LIS education and training programmes globally have reformed and reoriented their curricula. Multi- and trans-disciplinary and ICT-related modules and subjects have been integrated into study offerings and curricula are continuously being revamped to align them with the demands of the labour market (Munyoro, 2014). Prebor (2010) and Kovatcheva (2011). observed that today's LIS education programmes have absorbed courses ranging from computer science, education, communication and media studies to business management, technology, sociology, anthropology, psychology, political science, information systems, natural sciences and law. Minishi-Majanja (2007), reviewing efforts to integrate ICT into LIS curricula, found that LIS schools in sub-Saharan Africa have

indeed incorporated diverse ICT modules in their curricula as a strategy to prevent curriculum drift, to improve the quality of programmes and to realign them with labour environments needs and demands. Some LIS departments have recreated curricula by no longer focusing exclusively on the traditional library functions, rather letting their institutions play a more broadly-based role in the provision of information access (Chu, 2010). Other departments have changed the titles of their programmes, for example from Library Science to Library and Information Science, or Studies/Management, or Information Science/Studies/Management/Knowledge Management, as a strategy to embracing diversification and clustering into larger organisational groupings (Raju, 2013). He further observes that LIS departments in South Africa and a few other parts of the world are, jointly with related disciplines, offering advanced programmes such as media studies, computer science, informatics, information systems and business information management.

Lowden et al. (2011) pointed out that LIS departments have introduced work-integrated learning projects, job shadowing and internships as institutional responses to the demands of labour environments. In addition, they have introduced professional seminars and critical inquiry as new modules and made them into core courses. These courses are aimed at developing such general employability skills requirements as leadership, communication skills, and the ability to think critically and creatively, to work in a team and to be enterprising (Chaudhry et al., 2008). The courses attempt to empower students by combining teaching with practice through group projects, peer learning, presentations, online discussions and peer evaluation of project work (Chaudhry et al., 2008). Similarly, LIS professional bodies such as the International Federation of Library Associations (IFLA), the Chartered Institute of Library and Information Professionals (CILIP), the American Library Association (ALA) and the Special Libraries Association (SLA) have responded to concerns expressed by the LIS job market by developing competency frameworks. These frameworks explicitly accentuate the knowledge and the various competencies and employability skills that those wishing to enter the profession should acquire (Rehman, 2012**).**

Writing on students' evaluation method, Adebayo and Alex-Nmacha (2018) opined that since education is a process, aside awarding marks after examinations LIS schools should find a unified ways of evaluating students' cognitive, affective and psychomotor skills.

The literature is broadly in agreement that, worldwide, the LIS community of practice finds itself in the midst of a radical transition. This is attributed to socio-economic and technological factors such as changing modes of information production, storage and dissemination, changing patterns of economic competition, as well as new forms of work organisation, technological innovations and an intensifying consumerism that has resulted in increasing needs of users who expect information services to be not only technically competent, but also conveniently delivered.

3. RESEARCH METHODOLOGY

3.1. Research Design

The research employed descriptive survey research design which according to Nworgu (2015) is a type of study which aims at collecting data on describing in a systematic manner the characteristics

features and facts about a given population. This design gave the researcher the room for proper description and analysis of data collected.

3.2. Area of Study

Area of study is universities in Southeast Nigeria accredited to offer undergraduate programmes in LIS leading to the award of BLS, BLIS, BA/ BSc Education/LIS etc. These universities are spread in the five States of the region which are: Abia; Anambra; Ebonyi, Enugu and Imo State. The mentioned states cover the geo-political zone called South Eastern Nigeria with each housing one federal and state owned university respectively. Imperatively, there are 10 government owned universities in the region but of the 10, only 4 have accredited LIS schools. The universities are: Abia State University, Uturu (ABSU); Imo State University, Owerri (IMSU), Nnamdi Azikiwe University, Awka (NAU) and University of Nigeria, Nsukka (UNN)

3.3. Population of Study

The population of this study comprises all the undergraduate students of the Department of Library and Information Science of the schools under study from 100 to 400 levels

3.4. The Sampled Population

Population for this study is 980 LIS students from the four universities under study. To derive this number, a total enumerative sampling technique was applied. This technique according to Sharma (2014) is a sampling technique in which every subject meeting the criteria of inclusion is selected until the required sample size is achieved. This census method of sampling implies that all the undergraduates of LIS Schools under study were respondents.

3.5. Instrument for Data Collection

The principle instrument used for data collection is a structured questionnaire. The instrument consist of 'section A' that sought the demographic information of the respondents, while 'section B' contains items/statements that focused on the research questions developed in line with the study objectives. The researcher also used observation/document analysis which gave the researcher an insight to the curricula contents and interview with which data were collected on the state of library graduates from the university librarians of participating library schools. A document review checklist was developed, based on Bloom's (1984) taxonomy of learning domains: cognitive, affective and psychomotor and guided by the research question: Are library and information science students aware of emerging topics needed for the transformation of academic society? The outcomes for each course outline were delineated.

The checklist was used to systematically interrogate LIS curricular documents and course outlines and to ensure that valid information was identified (World Bank Institute (WBI) Evaluation Group, 2007). As each identified course outlines was analysed, the researcher completed the checklist, thus ensuring the recognition and collection of valid data (WBI Evaluation Group, 2007). After all the

course outlines and curricular documents had been analysed, the researcher coded and documented the data.

Assisted by a research assistant and Heads of Department of LIS of the schools, the questionnaires were directly administered to the students and were returned 100%. In analyzing the data collected, SPSS output format based on simple frequency count, percentage distribution, mean, standard deviation and Pearson's Chi-Square were used with data presented in figures and tables. Prior to using the instrument for study proper, it was subjected to a validity and reliability test. A test-retest method was used to collect data from 90 students used in trial testing. Cronbach Alpha was used to determine the reliability which gave a reliability coefficient of 0.87.

4. DATA PRESENTATION

The data collected for this study are here presented in figures and tables; with the figures showing the demographic data of the respondents and the tables showing data in respect of the research questions.

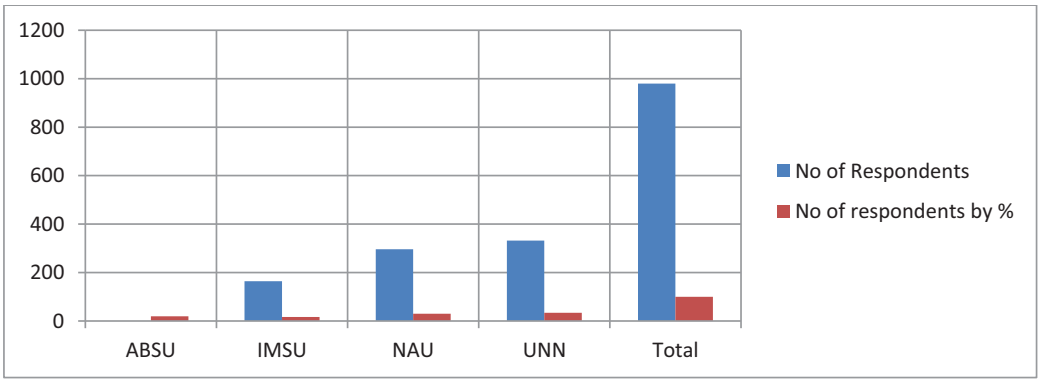

Figure 1: **Respondents by Institution**

Figure 1 show that 188 students representing 19.2% of the respondents are from ABSU; 16.7% or 164 students are from IMSU, while 296 students or 30.2% are from NAU and 33.9% or 332 respondents are from UNN.

Table 1: **Respondents by gender**

Institution	ABSU		IMSU		NAU		UNN		Total	
Sex	No	%	No	%	No	%	No	%	No	%
Male	80	8.16	58	5.91	114	11.63	154	15.71	406	41.41
Female	108	11.00	106	10.82	182	18.57	178	18.16	574	58.59

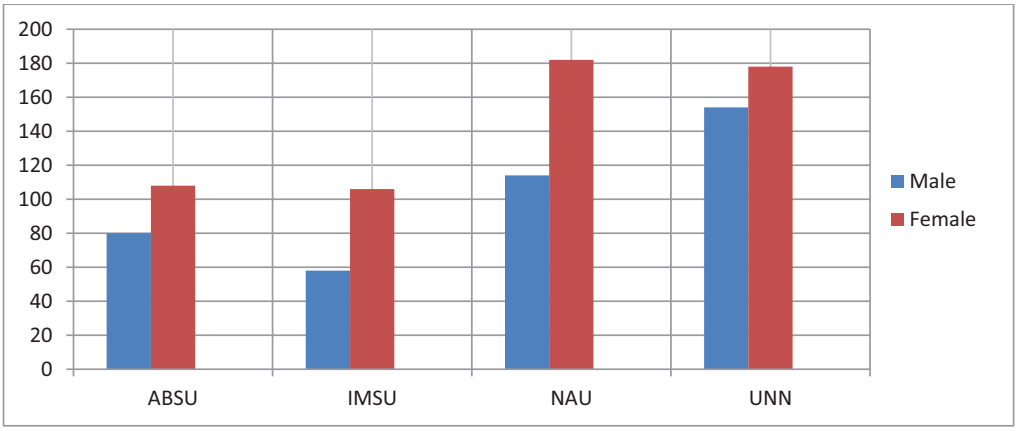

Figure 2: **Respondents by Gender**

Table 1 with figure 2, shows that of the 574 (58.59%) female respondents and 406 (41.41%) male respondents, ABSU produced 108 (11.00%) female and 80 (8.16%) male respondents while IMSU has 58 (5.91%) male and 106 (10.82%) female respondents. On the other hand, NAU produced 182 (18.57%) female and 114 (11.63%) male respondents and UNN having 154 (15.71%) male and 178 (18.16%) female respondents.

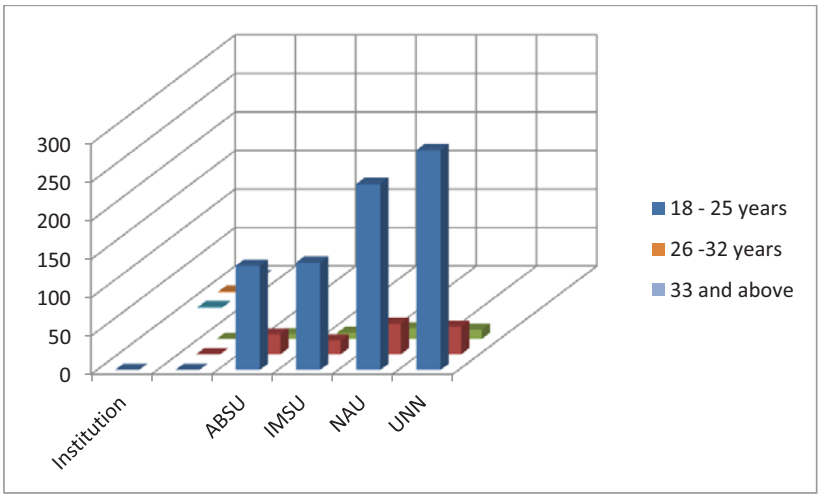

Figure 3: **Respondents by Age range**

Figure 3 above displays the age range of the respondents from the four institutions. The figure shows that students from the ages of 18-25 form majority of the respondents with ABSU-136; IMSU-146, NAU-242 and UNN- 574 totalling 574 respondents or 82.04%. They are distantly followed by those within the age range of 26-32 years with 120 (12.24%) responses and lastly those of 32 years and above with 40 0r 4.1% respondents.

Table 2: Educational processes in training LIS students

S/No	Items	SD	%	D	%	A	%	SA	%
1	The teaching process allows for full participation and question asking	28	2.9	28	2.9	400	40.8	524	53.3
2	The course contents are theory based with little or no practical classes	68	6.9	148	15.1	416	42.4	348	35.5
3	There are no practical classes on information literacy skills	72	7.3	224	22.9	440	44.9	244	24.9
4	Indexing and abstracting involve practical	448	45.7	352	36	108	11	72	7.3
5	There are practical classes on digitization of information resources	156	16	616	62.9	144	14.7	64	6.5
6	Students are not allowed to rate lecturers at the end of each course offered	64	6.5	124	12.7	440	44.9	352	36

N=980. Grand mean=15.53. Weighted mean=2.58

Key: SA=Strongly Agree. A=Agree. D=Disagree. SD=Strongly Disagr

Table 3: Emerging Topics for transformation of academic society

S/No	Item	HA	%	A	%	SHA	%	NA	%
1	Information ethics is one of the evolving trends in library & information science for the transformation of an academic society	156	15.9	244	24.9	236	24.1	344	35.1
2.	LIS discipline can help in the transformation of academic society through the knowledge of Altmetrics	92	9.4	160	16.3	260	26.5	468	47.8
3	One of the emerging topics for the transformation of academic society is cloud computing	128	13.1	176	18.0	340	34.7	336	34.3
4	Mobile services and marketing of information services is current trend in LIS education	228	23.3	180	18.3	520	53.1	52	5.3
5	Research data management by academic libraries can help in the transformation of academic society	344	35.1	148	15.1	12	1.2	476	48.6

N=980: Grand mean=11.16; Weighted mean=2.23

Key: HA=Highly Aware; A=Aware; SHA=Somehow Aware

Table 4: **Educational infrastructure and equipment for training LIS students**

S/No	Items	SA	%	A	%	D	%	SD	%
1	The department has well stocked computer laboratory for practical	720	73.5	124	12.7	92	9.4	44	4.5
2	The departmental library is well stocked with relevant e-database	116	11.8	80	8.2	476	48.6	308	31.4
3	There is access to institutional Wi-Fi/internet in the department	44	4.5	104	10.6	268	27.3	564	57.6
4	The library does not have OPAC	108	11	52	5.3	428	43.7	392	40
5	The department lacks modern digitization equipment for practical	220	22.4	396	40.4	268	27.3	96	9.6
6	The classroom are all fitted with interactive white board connected to the internet	84	8.6	140	14.3	376	38.4	380	38.8
7	There is no Resource description & Access Toolkit	332	33.9	324	33.1	192	19.6	132	13.4
8	The department is not equipped with teleconferencing infra-structure	256	26.1	428	43.7	156	15.9	140	14.3

N=980: Grand Mean=17.32; Weighted Mean=2.17

Key: SA=Strongly Agree; A=Agree; D=Disagree; SD=Strongly Disagree

Table 5: Methods of Evaluating LIS students

S/No	Items	SA	%	A	%	D	%	SD	%
1	Evaluation is based on previous achievement or personal characteristics	100	10.2	188	19.2	144	14.7	548	55.9
2	Evaluation is based on feedback on the progress towards mastering of relatively small unit of learning	124	12.7	272	27.8	380	38.8	196	20
3	Evaluation is through the identification of learning behaviour	24	2.4	200	20.4	372	38.0	384	39.2
4	Evaluation is by award of marks or attestation to successful completion of a relatively large unit of instructions (quizzes, assignments & terminal examinations)	604	61.6	224	22.9	116	11.8	36	3.7
5	Evaluation is using No.4 and other methods	148	15.1	164	16.7	412	42.0	256	26.1
6	Methods of evaluation not well known to me	108	11.0	128	13.1	144	14.7	600	61.2

N=980

Key: SA=Strongly Agree; A=Agree; D=Disagree; SD=Strongly Disagree

5. DATA ANALYSIS AND DISCUSSION OF RESULTS

This section presents and discusses results of the study focusing on current library and information science educational procedure as to determining how it holistically prepare potential librarians towards the changes that are taking place in our academic environment and the world.

Research Question 1:

What educational processes are being used in training LIS students?

Table 2, shows that 524 (53.3%) of the respondents strongly agree and another 400 (40.8%) agree that the teaching process allows for full participation and question asking, while the remaining 56 (5.8%) disagree. A total of 764 (78%) respondents indicate that the course contents are theory based with little or no practical classes, while 800 respondents representing 82% discontent that Indexing and abstracting involve practical whereas 705 0r 684 respondents affirm that there are no practical classes on information literacy skills. The same number that affirm that Students are not allowed to rate lecturers at the end of each course offered. On the area of practical classes on digitization of information resources, 79% 0r 872 indicate that there are no practical classes.

The synthesis of collected and displayed data in table 2, show that the teaching methods being used in students' instruction allow for full participation in the learning process as there are rooms to ask questions which make every session interactive. On the other hand, the data exposed the fact that the courses taught in LIS classes are not practical rather they are mostly based on theory but with sound teaching method. The finding reveals that university LIS curricula are oriented towards the development of intellectual abilities rather than applied skills. It further confirms Pillay (2011) assertion that university education has a strong theoretical and research orientation. This perception was validated by the LIS heads who, in response to the question 'What is the nature of the LIS curricula?' revealed that: the curriculum is theoretical in nature and can basically inculcate intellectual capabilities. Another noted: that our curriculum is focused on producing librarians by name and not library technicians. This view was further corroborated by a senior librarian in one of the university libraries who noted that LIS graduates from universities lack applied skills in cataloguing and classification'. The implication is that most LIS graduates from our universities cannot catalogue or classify information materials and this is indeed, a big challenge.

This result brings the dilemma of theory versus practice in LIS curricula to the fore. Virkus (2012) and Bawden and Robinson (2012) concurred that students gain much more from having a profound understanding of their profession, its theories, principles and concepts, than from building functional competencies. They maintain that practical competencies can be learned on the job and through lifelong learning and continuing professional development (CPD). But Augustyn and Cillié (2012) discontent this as they argued that librarianship is an applied discipline that has evolved from practice, and therefore cannot be disconnected from practice. Also Jacobs (2014), Nugent (2015) and Freeland (2016) argued that university education needs to be linked to practice. They consider the connection critical, not simply for the sake of being successful in the contemporary society but also to increase graduates' capacity for active civic and democratic participation. Lynch (2008) and Chu (2010) advocated for an optimal balance between theory and practice in LIS education whereby curricula offerings are appraised and, if necessary, redefined in such a manner that they contribute to both liberal and vocational qualities. Chaudhry et al., (2008) added that there should be a combination of teaching with practice through group projects, peer learning, presentations, online discussions and

peer evaluation of project work. While Prangya Das, Bijay Ku. Choudhury (2013), were of the opinion that LIS education should be tailored towards preparing LIS graduates for leadership and management roles to support national and economic development

As noted by Yorke (2004), simply including multidisciplinary modules in the curricula without adopting and using relevant instructional and assessment methods, does not ensure that graduates develop the cognitive; social, practical and prerequisites The need remains to embrace innovative approaches to teaching and learning that can lead to competency-based, student centred and results-focused education delivery models in LIS education

Research Question 2:

Are LIS students aware of emerging topics needed for the transformation of academic society?

Table 3 shows the level of awareness of emerging topics for the transformation of academic society in SE Nigeria by students. 236 (24.1%) respondents are somehow aware, 24.9% or 244 are aware and 156 (15.9%) highly aware that Information ethics is one of the evolving trends in library & information science for the transformation of an academic society whereas, 35.1% representing 344 respondents are not aware. Of a total of 980 respondents, 468 (47.8%) are not aware that LIS discipline can help in the transformation of academic society through the knowledge of Altmetrics. The researcher's contact with some of the students reveals that majority of them do not know or have not heard of the concept 'altmetrics'. While 260 (26.5%) respondents are somehow aware, 92 or 9.4% are strongly aware and the remaining 160 (16.3%) are aware. On cloud computing, 128 (13.1%) indicate that they are highly aware that it can help in the transformation of academic society in SE Nigeria, 176 (18%) are aware, while 340(34.7) are somehow aware. On the other hand, 34.3% or 336 respondents indicate that they are not aware. Majority of the respondents- 928 (94.7%) are strongly aware, aware or somehow aware that mobile services and marketing of information services is current trend in LIS education, while the remaining 5.3% or 53 respondents claim ignorance. Meanwhile, 344 (35.1%) and 148 (15.1%) of the respondents are highly aware and aware that research data management by academic libraries can help in the transformation of academic society; the other 476 (48.6%) respondents are not aware while only 12 or 1.2% are somehow aware.

To determine the level of awareness of emerging topics needed for the transformation of academic society by undergraduates, a test of norm was conducted with the result showing that scale between1-7 is low, 8-13 moderate and 14-20 high. The overall mean for the awareness among the students stands at 11.16 which is within the scale of 8-13. From the above analysis, one can deduce therefore that the awareness level of emerging topics needed for transformation of academic society by the students is **moderate.**

Writing on this, Lowden et al., (2011) suggest that multidisciplinary competencies such as project management, communication and presentation, pedagogy and skills related to technology, business,

planning, designing and general management are should form integral part of today's librarianship and service provision in the transitory LIS labour environment. Pettigrew (2013) and Gibbs et al. (2011) shift the focus from multidisciplinary abilities to the need for knowledge of information ethics. According to these authors, LIS professionals need to have an in-depth understanding of information-related laws and ethical issues pertaining to intellectual property rights (IPR) such as copyright laws, information access, rights to information, privacy protection and open access.

As noted by Mabawonku (2011), the curriculum structure for LIS in Nigeria concentrates on major areas like collection development, management principles, information and communication technology, information organization, economic and marketing of information, publishing and book trade, research methods, general studies, current issues and trends in information practice, etc. Prebor (2010) and Kovatcheva (2011) observe that today's LIS education programmes have absorbed courses ranging from computer science, education, communication and media studies to business management, technology, sociology, anthropology, psychology, political science, information systems, natural sciences and law. Minishi-Majanja (2007), reviewing efforts to integrate ICT into LIS curricula, found that LIS schools in sub-Saharan Africa have indeed incorporated diverse ICT modules in their curricula as a strategy to prevent curriculum drift, to improve the quality of programmes and to realign them with labour environments needs and demands. Some LIS departments have recreated curricula by no longer focusing exclusively on the traditional library functions and rather letting their institutions play a more broadly-based role in the provision of information access (Chu, 2010). Furtherance, Smith in Akwang (2013) noted that today, the courses content of LIS is developed along computer science, management, psychology, economics, information technology, communication, mathematics, marketing, education, among other related fields.

.A senior librarian identified another set of competencies such as training, strategic management, public relation, resource description and access (RDA), licensing and quality control. This respondent noted: We require LIS graduates with competencies in training/ teaching, information literacy skills (ILS), knowledge management (to manage institutional repositories), knowledge of resource description and access (RDA), information auditing skills, copy cataloguing skills, quality control competencies, e-resources licensing and strategic management, public relation skills, negotiating skills with database vendors and publishers and disability awareness in collection management and information provision.

The data collected in the present study shows, however, that LIS education programmes in SE Nigeria have, to some degree, responded to the call for transformation of the academic society. This is obvious from the presence in the curricula of various multi-disciplinary modules such as project management, information technology, legal and ethical issues, information systems, human resources, management and a number of ICT-related modules. This suggests that LIS educators are aware of the need to modify educational programmes in response to the demands and needs of the society

Research Question 3:

What educational infrastructure and equipment are available for training LIS students?

The data in table 4 reveal that a total of 844 (86.3%) respondents, agree that the LIS department has well stocked computer laboratory for practical. While the remaining 13.9% or 136 respondents disagree. The researcher observed that most respondents who disagreed came from Abia state University that has a poorly equipped LIS laboratory. On the other hand, it was observed by the researcher that most equipped laboratories lack the needed maintenance culture thus most system are not functional and where they are, there is always this problem of epileptic power supply which most cases hinders their usability. Majority of the respondents- 884 0r 80% disagree that the departmental library is well stocked with relevant e-database. The above claim was also substantiated by various Heads of Library Departments of these universities who complained of poor funding and support from university management a situation they said has hindered them from providing the department with state of the art infrastructure and equipment.

The respondents-832 (84.9%) refuted that there is access to institutional Wi-Fi/internet in the department whereas 15.1% or 148 respondents affirm to it. These set of respondent it was observed came from UNN where it was discovered that for one to have access to the institutional Wi-Fi/internet he must subscribe to it with an annual payment.

The table also shows that 820 respondents or 83.7% indicate that their libraries have OPAC while the other 160 (26.3%) indicated otherwise. The only observation made is that inasmuch as these universities have OPAC, the operations and accessibility are restricted within the library environment as they are been powered through local area network (LAN). The result also revealed that the departments do not have Resource Description Access (RDA) with a response of 656 representing 67% with the exception of UNN. In the same vein, 77.2% or 756 respondents revealed that their classrooms are not fitted with interactive white board let alone been connected to the internet. The remaining 23% or 224 respondents indicated otherwise which in the opinion of the researcher, may be out of ignorance as there was no classroom seen in the four universities that had interactive white board let alone been connected to the internet.

In order to determine level of availability of educational infrastructure for training LIS students a test of norm was carried out and the results reveal that the scale between1-10 is low; 11-20 is moderate while 21-32 is high. As indicated on the table, the result yielded a grand mean of 17.32 which fall within 11-20. To this end, one can deduce that availability of educational infrastructure for LIS students' training in SE Nigeria is moderate.

All the same, LIS education like other academic programmes requires extensive use of quality facilities that support the process of teaching and learning. Suffice to say that no educational programme in any institution can thrive without quality teaching and learning facilities. LIS schools need standard size lecture halls with pitched floor, well-furnished staff offices with toilet facilities, libraries, and well equipped common room for students. Also, the availability of multimedia room, work

rooms, laboratories, microphones and loudspeakers, projector screens, and other modern teaching and learning facilities could enhance instruction delivery.

It is a worrisome situation, that most lecture halls in academic institutions do not accommodate all the students at a time. LIS students are seen standing by the windows and doors outside receiving lectures prompting the lecturer to teach at the top voice for not less than one hour in the bid to catch the attention of the overwhelming number of students. The wretched situation does not only hamper teachers' effectiveness but also leads to serious negative impact on teachers and students' morale for innovation and creativity. This problem could be greatly attributed to a lot of factors like poor and epileptic funding of higher institutions, mismanagement of the available funds; lack of quality consciousness, poor maintenance culture, and misplacement of priority by government. The above state is corroborated by Evarista (2009), when he describes the state of teaching and learning facilities in Nigerian institutions as deplorable, noting that the facilities are either lacking or grossly inadequate.

Writing on the need for education infrastructure and equipment for LISE Akwang (2017) explains that new technologies in form of software packages, hardware, and electronic communications could provide new, interesting, and rewarding learning methods and conducive environment for LISE. The use of projectors and public address system is extremely needed to enhance visual and audio quality especially when teaching large class size. LIS schools need at least a laboratory equipped with computer systems and Internet connectivity and sometimes with audio-active equipment. Besides, any Internet-aided environment offers people the opportunity to interact and discuss with other people of same information interest using facilities like Bulletin Board System (BBS), Telnet, Finger, Gopher, File Transfer Protocol (FTP), Archie, etc.

Teixeirajeremie (2017) posits that building, classroom. Laboratories and educational infrastructure are crucial elements of learning environments in schools and universities. There is strong evidence that high quality infrastructure facilitates better instruction, improves students' outcome and reduces dropout rate among other benefit. Varshney (2017) corroborated the above view as he averred that school building, classroom, playground, library and equipment are the most important aspect of school infrastructure. Spacious and refurbished buildings and well ventilated classroom are a most in schools. Noting that properly planned school infrastructure is an out-and-out key factor in effective teaching and learning. It is important added Nalanda International School (2020) for schools to have good infrastructure to improve the performance of the students and improving the school system. It pertinent to state, that though school infrastructure and equipment are important but at the same time, it should also have emphasis on a student/instructor friendly ambience and activity and value based learning.

In a recent study from the UK, Barrett, Davies, Zhang and Barrett (2016), found that environmental and design, elements of school infrastructure together explained 16% of variation in students' academic progress. The research shows that the design of education infrastructure affects learning through three interrelated factors: naturalness, stimulation and individualization.

It is disheartening therefore to note, that despite the importance of infrastructure and equipment to education, some education policymakers are still increasingly focused on quality of education and school learning environment that many countries including Nigeria which is the macrocosm of the microcosm call SE Nigeria still use fragmented or piecemeal approach to investing in their education infrastructure.

Research Question 4:

What methods are used in evaluating students of LIS?

Table 5 shows that majority of the respondents- 828 representing 84.5% of the total respondents of 980, indicated that they are being evaluated by award of marks or attestation to successful completion of a relatively large unit of instructions by means of quizzes, assignments & terminal examinations. This summative method of evaluation has into consideration, only cognitive domain which allows the students to acquire only conceptual skills and living them incapacitated in the areas of affective and psychomotor motor skills. The percentage of respondents that indicated other methods of evaluation like; evaluation based on previous achievement or personal characteristics -288 (29.2%); evaluation based on feedback on the progress towards mastering of relatively small unit of learning-396 (40.5%) and evaluation through the identification of learning behaviour-224 (22.8%) are those that are in the class of industrial attachment otherwise called industrial training in Nigeria. The class of respondents are mostly from UNN and NAU.

According to this study, the most commonly used assessment methods in LIS schools are essay examinations, short answer examinations and multiple-choice examinations and in recent time 15% score from industrial attachment for 300 level students

The reviewed university curricula documents hint at a trend towards the development of conceptual rather than functional and transformational skills. This is apparent in the instructional and assessment methods adopted in the course outlines. The instructional method (lectures) and the assessment method (written essays) accentuate cognitive above applied abilities as desirable in LIS university graduates. The course outlines lacked, for example, hands-on slots, or seminars, and cataloguing and classification standards (such as AACR2 and DDC) were not presented as obligatory resources in the relevant modules.

The implication of the finding is that the instructional and assessment methods currently used in university LIS education and training programmes in SE Nigeria do not stimulate the development of functional skills. To this Adebayo and Alex-Nmacha (2018) argued that since education is a process, outside awarding marks after examinations, LIS schools should find a unified ways of evaluating students' cognitive, affective and psychomotor skills. While Bognar and Bungic (2014) believe that evaluation of higher education teaching could be brought to a higher level by educating teachers and students about the importance of evaluation for the quality of teaching process and finding ways to include students in this process.

5.1. Conclusion and Recommendations

This study exposes the fact that LISE is a virile tool for the transformation of the academic society. On the other hand, that the LIS education in this region are faced with many challenges which are bound to work against the purpose of using LISE in the transformation of the SE Nigeria academic society. They include; improper teaching methods, lack of educational infrastructure and equipment, students not taught most of the emerging topics in line with global trends as a result of the birth of ICT and changing world that is ruled by information as well as poor evaluation methods of students. The above opinion is also shared by Katuli-Munyoro and Mutula (2017) as they declared that LIS professional competencies and skills must evolve continuously in order to remain relevant in the contemporary world. The data suggest (Noting that today's LIS educators have not mastered the required competencies and are not able to transfer these successfully to their students.) The study leaves no doubt as to the necessity for LIS educators and practitioners to adopt a position of continuously learning and relearning to keep up to date.

In view of the above, and if would be librarians would stand the test of time and be relevant in a daily changing information age there must be a paradigm shift. As a way forward therefore, the researcher is of the opinion that the following measures should be applied as remedies:

- It is high time NUC and LRCN arose to their constitutional mandate and responsibilities as quality assurance agencies responsible for the reviewing of LIS curricula, accreditation of library schools and enforcement of standards. They should work as to avoiding the temptation of 'brown envelope' (The name that Nigerians christened high profile bribery) which in most cases are valued at the detriment of standard and excellence. The underlined factor here is that NUC should give accreditation to LIS schools only when such school is found to have all the pre-requisite which include: human capacity, necessary infrastructure and equipment. These two agencies should partner to ensure regular review of LIS curricula in line with what are obtained in advanced nations in accordance with the standards stipulated by International Federation Library Association (IFLA) and Chartered Institute Library and Information Professionals (CILIP) in an information age.

- The heads of LIS schools need to adopt aggressive and assertive approach to ensuring that the desired change in the education of information professionals is achieved. LIS schools need to apply innovative management principles to harness the products, process, and services or operations within the department and host institution. Although, the professional knowledge base of librarians or LIS educators is highly important in the transformation of LISE, obviously, management skills cannot be overemphasized in reaching targeted performance.

- LIS schools need to critically assess the ethical issues arising from the information cycle within their environment and develop ethical codes alongside with the standards ones for

effectiveness and efficiency. Thus, changes in information system brought by different technologies must be a guiding factor. As noted by Mabawonku (2011), the essence of ethical code is to resolve conflicting interests within the information cycle, and harmonize the interests of information providers with those of information users. Consequently, LIS schools in SE Nigeria need to include in their curriculum, course(s) that would not only equip the students with knowledge of best practices for the profession but also with the ability to educate the government, policy makers, and other stakeholders on the value of maintaining ethics in providing, accessing and using information for decision making, self and national developments.

- In the words of Akwang (2017), LIS schools in Nigeria need to partner with other LIS schools within the country, in other developing countries and in the developed world to bring about innovation and transformation in many areas of LISE. The areas include teaching, research, curriculum development, knowledge sharing, students' industrial training, oral examination, exchange programmes among others.

- Education and training of staff is one of the most critical ingredients for improved organizational performance (Sivadas, 2012). Considering the technological advancement and changes in the teaching environment, process, and strategies, staff who are drivers of the change must receive some level of education and be continuously trained. Resis in Johnson (2012) affirmed that all activities of any institution are initiated and determined by the persons that make up the institution. That means, the available school plants, equipment, computer systems, and all other facilities are unproductive except for human efforts and directions. Therefore, members of staff need to be technically and socially competent to perform adequately on a given task or job. The view is that training and re-training the trainers is a sine-qua-non if their products are to be relevant in the scheme of the changing world.

- LIS practitioners will have to be provided with the knowledge and functional skills to use and manipulate these and future technological innovations for up-to-date service delivery and for true professionalism. It appears that traditional professional competencies, skills, techniques and technologies of LIS practitioners have been superseded by modern technological requirements. LIS education and training programmes are challenged by the need to respond to new demands. The suggestion is that the LIS educational system has become passé and must be re-engineered so as regain its relevance in as a societal transformation tool.

- The various governments under whose jurisdiction falls the funding of these library schools, should stop paying lip service to the provision of educational infrastructure and equipment knowing full well that these amenities act as catalyst to effective teaching and learning. On the other hand, those working as heads of library schools should avoid this Nigerian factor that every appointment is an avenue to misappropriate fund and enrich one-self and

associates. Apart from judicious use of fund allotted for the development of these library schools, the heads ought to embrace proper maintenance culture and ensure that infrastructure and educational equipment under their care are well maintained and taken good care of.

- Heads of Library and Information Science Departments should as a matter of necessity ensure the inclusion of practical sessions in the teaching of topics like: indexing; abstracting, information literacy in a digital age, digitalization; database management, cataloguing and classification among others.

- The NUC and LRCN should devise different forms of summative and formative evaluation methods for LIS students putting into consideration the three domains of knowledge in which case, students' conceptual, synthesis and application skills in library and information science will be tested. In fact, the agencies should come with external independent periodic assessment of internal education quality assurance at LIS schools to be conducted by tested and reliable professionals designated 'a body'.

- Furthermore, evaluation being a cooperative process means that both teachers and learners are all interested parties; to this end, there must be a policy (which will be part of the educational system) which allows the students to assess their lecturers after classes after all, the whole idea of evaluation is to provide information about someone's work with a view to improving it in case there are loopholes. Let us make hay while the sun shines and make librarianship the envy of all.

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