The Library Information Science (LIS) Educator as a Catalyst in the Implementation of Information Literacy for Lifelong Learning in Nigeria

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Abstract: In the 21st century, information has become as significant as such natural resources as oxygen, water and land. It is against this background that the objectives of this study are identifying strategies for teaching students the importance of information literacy and the role of LIS educators in establishing a higher institution literacy programme that would provide students (undergraduates and postgraduates alike) a good knowledge of anti-plagiarism, research and project-writing, information retrieval skills, self-directed learning, deepened understanding of library information resources, and the effective utilization and application of information resources for credible research outcome. The study adopted the survey research method to examine the role of library and information science educators as catalyst in the implementation of information literacy for lifelong learning in higher institutions. Multi-stage sampling technique including purposive and simple random sampling technique was used to sample respondents for the study. Empirical studies were reported for support of propositions, and a structured instrument was utilized for data collection. The data collected was analyzed using frequency count and percentages and descriptive statistics of mean ($\bar{x}$) and standard deviation ($\pm$). The result showed that the respondents are aware and knowledgeable about the role and strategies of librarians in teaching information literacy. However, the result showed that the respondents do not fully know the extent of information literacy skills and acknowledgment of authors of works consulted during research.

Keywords: Information Literacy Skills, Librarians, Library and Information Science, Lifelong Learning

1. Introduction

History has shown that ignorance is the root cause of not just individual retardation but also societal underdevelopment. However, information has become fundamental in addressing the menace of ignorance in order to pave the way for development in every facet of life whether at the individual, group, organization or national level. Over time, information and education have become vital tools in addressing the issue of ignorance. With the 21st century information revolution aided by the sophistication of ICT and the Internet, the era of inadequate information resources is over. Indeed, information has become an important commonplace survival package, which is as significant as such natural resources as oxygen, water and land.

The evolving and dynamic nature of information, however, makes it imperative to constantly learn, unlearn, relearn, update, replace, adapt or improve upon previously acquired knowledge. In this dispensation, the role of information professionals in the contemporary world has been redefined to include the provision of information resources and services that are not limited to the boundaries of bricks and mortar but as a practical and effective response to information user behaviours. Indeed, such acquired knowledge transcends the transient formal education within the university to include open education in informal settings, which is aimed at mass literacy.

As a result of the preponderance of information in the modern world, the problem that has arisen is that many library users, particularly in underdeveloped nations such as Nigeria, may feel self-sufficient in sourcing needed information but, indeed, lack the requisite skill to identify

and utilize information resources in order to effectively apply knowledge in resolving their information needs. This, therefore, has created a problem of information utilization and its application to knowledge base in most higher institutions in Nigeria with the resultant unpleasant incidents of plagiarism, duplication of projects, dissertation or theses, assignment/project-writing contracting, examination misconduct, academic mercenary, recycling or overstretching (repetition) of research topics, lack of self-directed learning, poor research report, and other academic abnormalities that pave the way to poor research productivity. Unarguably, these unpleasant incidents lead to a sharp contrast in quality research outcome between Nigeria, an underdeveloped nation, and nations of the developed industrialized world.

With the advent of Information Communication Technologies (ICTs), even the philosophy of the library has witnessed a paradigm shift. In providing access to information resource, therefore, the modern librarian is now tasked with the responsibility of assisting, directing, and coaching users on how to navigate and use available myriad information resources. The idea of the proverbial "bespectacled, cardigan-clad, hush! hush!! Librarian who dusts and arranges books in shelves" has changed drastically. The modern librarian must be an information guidance/counsellor, who, through counselling, provides users with skills to locate information alternatives, credibility assessment, ethical guidelines and standards of online information use, information security, and information use and application skills. However, and to a large extent, this is still a daydream for most librarians, particularly Library and Information Science (LIS) educators in developing countries such as Nigeria. This trend may be due to lack of commitment and/or failure to place high premium on the value of information by university management and LIS educators who are the advocates of information literacy.

It is against this background that this study seeks to examine the place of the librarian as a catalyst in the implementation of information literacy for academic success and lifelong learning in selected higher institutions in three geo-political zones in Nigeria.

2. Literature Review

It has become sine qua non to promote information literacy in the modern world. In 1974, Paul Zurkowski coined the terminology 'Information Literacy' [23], a concept now on the front burner of modern librarianship. In line with Zukorwski's submission, the 1989 American Library Association (ALA) report presents a strong statement on the importance of information literacy as it relates to the goals of lifelong learning and effective citizenship. Thereafter, several definitions of information literacy have emerged. The definition provided by the United States National Commission on Library and Information Science" [2] is as follows:

Information Literacy encompasses knowledge of one's information concerns and needs, and the ability to identify, locate, evaluate, organize and effectively create, use and communicate information to address issues or problems at hand; it is a prerequisite for participating effectively in the information Society, and is part of the basic human right of life-long learning [11].

Information literacy has equally been defined by Webber and Johnston as the "adoption of appropriate information behaviour to obtain, through whatever channel or medium, information well fitted to information needs, together with a critical awareness of the importance of wise and ethical use of information in society" [22]. In the 21st century, information literacy is a key attribute for everyone, irrespective of age or experience. Information literacy manifests in an understanding of the ways in which information is created and handled. Various definitions of information literacy have been developed since the term's inaugural use in 1974 and different authors have described it as a prerequisite for lifelong learning [14, 10]. Others have described it as a natural extension of the concept of literacy in our society [9, 20].

Importantly, information literacy is the ability to find, evaluate, organize, use, and communicate information in all its various formats, most notably in situations requiring decision-making, problem solving, or the acquisition of knowledge. Information literacy incorporates the abilities to recognize when information is needed and then to initiate search strategies designed to locate the needed information. It includes evaluating, synthesizing, and using information appropriately, ethically, and legally once it is accessed from any information source. It is a blend of research skills, critical thinking skills, computer technology skills, and communication skills. Information literacy is essential for academic success, effective functioning in the workplace, and participation in society as knowledgeable citizens. Information literacy, apart from enhancing personal development, also builds functional members of society who, ultimately, propel community welfare and economic development. In this respect, Hillenbrand has observed that 21st century politicians, for instance, have begun to recognize the crucial role of information as the new currency of democracy and initiatives [15].

Bawden defines information literates as individuals that "have learned techniques and skills for utilizing the wide range of information tools as well as primary sources in molding information solutions to their problems" [6]. For the information literate individual to evolve, emphasis is now shifting to the role and approach of acquiring survival skill-set in the 21st century. In this regard, Association of College and Research Libraries posits that "An information literate individual devises strategies for updating self-generated knowledge and recognizes the principles of intellectual freedom and equitable access to information" [4]. For Doyle, an information literate person is one who recognizes the need for information; recognizes that accurate and complete information is the basis for intelligent decision-making; formulates questions based on the information needs; identifies potential sources of information; accesses sources

of information, including computer and other technologies; evaluates information; organizes information to integrate new information into existing body of knowledge and practical application; and uses information in critical thinking and problem-solving [13].

The first advocates of information literacy were mainly school librarians in the United States but in the 1980s the use of the term and the concept became more common across disciplines and professions. Accordingly, "significant events in the lifespan of the concept include the establishment of the American Library Association's (ALA's) Presidential Committee on Information Literacy in 1987 and its subsequent report produced in 1989" [2]. To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and effectively use the needed information. This requires that schools and colleges should appreciate and integrate the concept of information literacy into their learning curricula, because they play a leadership role in preparing individuals and institutions to take advantage of the opportunities inherent in the information world. Ultimately, information literate people are those who have competence in the techniques of learning. They know how to learn because they know when information is needed, the source of the information, how knowledge is organized and how to use such information to advantage. With such understanding, they have become people prepared for lifelong learning because they can always find the information needed for any task or decision-making.

There is ample literature on the importance of information literacy for information users especially in the academic environment. Academic literature, for instance, constitutes a veritable source of relevant information for students and such literature includes refereed research journals and academic textbooks. Academic literature provides students sufficient grounds to reflect upon and discuss the implications of results of research. It is imperative to have a systematic and rigorous knowledge of the sources of information for making informed choice from the different information resources, which include census data, institutional records, private correspondence, oral testimony, research diary, original datasets, reports, dissertations, newspapers, and conference reports among others. Students must check if these sources are the views of one person and are based on anecdote or personal opinion rather than the result of a systematic research approach.

To be scholarly, one must be able to distinguish between different sources of literature and their different levels of value and importance to academic study in order to apply them appropriately. Information search strategies become necessary and they refer to plans for finding relevant information from an information system or organization. It is broadly seen as a "conscious effort or approach, or decision-making to solve a problem or achieve an objective" [13]. "Information search strategies involve the identification of relevant information source, be they bibliographic or full text databases or the Internet" [19]. Oyedokun notes that "this

also includes the selection of search terms and other symbols, developing search profile and modifying profiles by iterative search strategies for possible retrieval of required sources".

In information retrieval process, a user needs to construct a search string, which is a combination of keywords, truncation symbols and Boolean operators, which must be entered into the search box of an electronic library resource, online database or an Internet search engine as a search tool. From here, queries are analyzed for conceptual content and are translated into the vocabulary of the system using keywords or other relevant details such as year and place of publication used to match against the document surrogates in the database [16]. Keywords are words or phrases or a combination of both drawn from the title of a document to make significant descriptions of the document to be retrieved. These may be found in the title, subject heading, content note, abstract or the text of a record in an online catalogue or bibliographic database. Keywords are not only used to describe relevant documents in a database but are also used in facilitating the retrieval of relevant documents.

In general, the evaluation of sources involves looking at quality, accuracy, relevance, bias, reputation, currency, and credibility factors in a specific work, be it a book, e-book, article, website, or blog posting. Before a source is included in the literature, it is important to clearly understand what it is and why such is being included. It is equally important to note that "using inaccurate, irrelevant, or poorly researched sources can affect the quality of your own work" [7]. In evaluating an information resource, the following are to be considered: date, sources, author, publisher, relevance, authority, appearance, reason, credibility, citation analysis, accuracy, reliability/objectivity, currency, scope/purpose, etc. Generally, non-academic sources of literature should be treated with caution in order not to make exaggerated or generalized claims.

It is important to note that "Information literate persons are flexible, can adapt to change and are able to function independently and in groups" [21]. An information literate individual knows how to learn and is capable of continuing lifelong learning. Hence, the term 'Information literacy' is applied to information problem solving skills [3]. The process of becoming information literate is a lifelong endeavour that should be inculcated right from primary school and be a part of formal training in all phases and all subject areas during the entire education process [8]. Boekhorst suggests the consideration of information literacy/illiteracy in information-rich versus information-poor contexts.

Information literacy is categorized into three main groups [5]. The first group, According to Audunson and Nordilie describes technical capabilities, that is, computer literacy. The second deals with intellectual capabilities as they relate to traditional literacy while the third relates to communicative competence, presupposes technical as well as intellectual capabilities. For each dimension, the authors distinguish several levels of competence: from basic competence to super-user competence and to in-depth

competence. They also consider information literacy as the sum of different kinds of literacy.

According to Dorner and Gorman, a critical look at the various definitions of information literacy skills reveals that definitions and models from the western or developed world may not be operational in the developing world [12]. They assert that:

There are serious shortcomings with the definition of information literacy when it is applied to developing countries. To begin with, it tends to reduce the process to a group of "skill sets", and more particularly reduces it to a functional technological skill. Further, it does not question the basic assumptions about information, and how it becomes knowledge, assuming the latter to be something external that can be tracked down and captured like small wild animals.

For Dorner and Gorman, "Information literacy" "must involve the development of a capacity within local communities and local cultures to critique existing knowledge found by means of effective information literacy and to construct new knowledge on the basis of this critique" [12]. Dorner and Gorman's operational definition of information literacy are summarized to mean the ability:

1) to be aware of why, how and by whom information is created, communicated and controlled, and how it contributes to the construction of knowledge;

2) to understand when information can be used to improve their daily living or to contribute to the resolution of needs related to specific situations, such as at work or school;

3) to know how to locate information and to critique its relevance and appropriateness to their context;

4) to understand how to integrate relevant and appropriate information with what they already know; and

5) to construct new knowledge that increases their capacity to improve their daily living or to resolve needs related to specific situations that have arisen [12].

Information literacy is, however, challenged and contested by other broad approaches, which focus on issues concerning the use of information within social contexts. It is for this reason that Kapitzke notes that concepts which are focused purely on learning "fall short of adequately explaining and providing for present social, cultural and economic conditions" [17]. Kapitzke adds that without explicit recognition of the socio-political and ideological dimensions of information and knowledge consumption and production, an understanding of information literacy is potentially insidious.

It is observed that the personnel involved in information literacy work have emerged from different disciplines of teaching, educational research and libraries, bringing with them expertise and specialist knowledge from these diverse areas [1]. Information skills, therefore, should mean skilled behaviour in respect of understanding as a result of successful interaction with a source of information. If this is so, two things come to play. Firstly, information literacy skills cannot be taught in isolation of the context of their operations. Secondly, people learn to study by studying and because information literacy skills are, in the end, inextricably linked to personal knowledge, there is no set of skills to be acquired as if one has stretched out a hand and taken them from the environment. Instead, they are developed as part of personal developments.

There are two ways to look at information literacy skills in any learning environment [18]. The first way relates to study skills, which students, researchers, academics and other information users will need to put to use during their study or research. These include being able to use a library and its resources in advancing one's studies or research, perform literature searches and then apply them to whatever depth or complexity that is required for research in any discipline. It equally involves the satisfactory application of citations and references. This approach supports the idea of a competent user, one who is able to function effectively as part of the academic community. The second strand is about learners being prepared to partake fully in a activity chosen. This strand includes awareness and understanding of the way in which information is produced, some practical ideas of how information is acquired, managed, disseminated and exploited, particularly with a knowledge of how appropriate professional groups use information in the workplace, in business, and in the world of culture and the arts. It also includes the critical appraisal of the content and validity of the information [18].

3. Methodology

This study adopts the survey research method to examine the place of the librarian as a catalyst in the implementation of information literacy for academic success and lifelong learning in higher institutions. Central to the objectives of this study are enumerating strategies for coaching students on information literacy and the role of the LIS educator in establishing university-wide literacy programme to provide university students adequate knowledge about anti-plagiarism, research and project-writing, information retrieval skills, self-directed learning, deepened understanding of library information resources, and ultimately the utilization and application of information resources and production for plausible research outcome.

The population comprised of LIS students and academic librarians in South-South geo-political zone, Nigeria. Multi-stage sampling technique which includes purposive and simple random sampling technique was used to sample 153 LIS students and 16 academic librarians as respondents for the study.

Empirical studies were reported for support of propositions, and a structured instrument was utilized for data collection. Ethical standards of validating an instrument for research were strictly adhered to in order to establish the reliability and construct validity for a reliable instrument for data collection. The collected data was analyzed using frequency count and percentages and descriptive statistics of mean ($\bar{x}$) and standard deviation ($\pm$) to answer research questions.

4. Result and Discussion

Table 1. *Strategies for teaching information literacy.*

SN	Items	SA	A	D	SD	x̄	±	Remark
1	Orientation programme/Library use instruction	13 (81.3)	3 (18.8)	0	0	3.8	2.2	Agreed
2	Traditional Instruction method/part of course curriculum	6 (37.5)	8 (50)	2 (12.5)	0	3.3	2.6	Agreed
3	Self-directed/independent learning/ individualized consultation	3 (18.8)	11 (68.8)	2 (12.5)	0	3.1	2.9	Agreed
4	Laboratory session/computer assisted, book display, new arrival	5 (31.3)	9 (43.8)	7 (18.8)	1 (6.3)	3.0	2.9	Agreed
5	Access to research aids	6 (37.5)	7 (43.8)	3 (18.8)	0	3.2	2.5	Agreed

Table 1 above shows that the respondents agreed with all the items of strategies of teaching information literacy in the hierarchy order of 3.8 (orientation programme/literacy use instruction), 3.3 (traditional instruction method/part of course curriculum), 3.2 (access to research aids), 3.1 (self-directed/independent learning/individualized consultation), and 3.0 (laboratory session/computer assisted, book display, new arrival). From this result, it is evident that there is sufficient knowledge of the strategies for teaching of information literacy among the respondents. Consequently,

Information search strategies involve the identification of relevant information source, be they bibliographic or full text databases or the Internet [19]. The author notes that this also includes the selection of search terms and other symbols, developing search profile and modifying profiles by iterative search strategies for possible retrieval of required sources. In accordance, it is explained that adequate information literacy planning should be aware of why, how and by whom information is created, communicated and controlled, and how it contributes to the creation of knowledge [12].

Table 2. *Roles of librarians in information literacy programme.*

SN	Items	SA	A	D	SD	x̄	±	Remark
1	Consultants/liaison, advocacy	9 (56.3)	6 (37.5)	1 (6.3)	0	3.5	2.4	Agreed
2	Outsourcing/outreach	8 (50)	5 (31.3)	3 (18.8)	0	3.3	2.1	Agreed
3	Curricula design	7 (43.8)	7 (43.8)	2 (12.5)	0	3.3	2.1	Agreed
4	Evaluation/assessment	8 (50)	6 (37.5)	2 (12.5)	0	3.4	1.8	Agreed
5	Organization of learning materials/support	8 (50)	7 (43.8)	1 (6.3)	0	3.4	1.5	Agreed

Table 2 above shows that all the items on the roles of librarians in information literacy programme. The items obtained the mean score of; consultants/liaison, advocacy (3.5), outsourcing/outreach (3.3), curricula design (3.3), evaluation/assessment (3.4), and organization of learning materials/support (3.4). This shows that the respondents are knowledgeable on their roles in information literacy

programme. Accordingly, to render information services, the librarian must be information literate person, therefore, asserted that information literate persons are flexible, can adapt to change and are able to function independently and in groups [21]. Such skills will enable them to perform the roles in Table 2.

Table 3. *Sources of information resources in the library.*

SN	Items	SA	A	D	SD	x̄	±	Remark
1	Document section	48 (31.5)	65 (42.6)	20 (13)	20 (13)	2.9	2.5	Agreed
2	Archival section	28 (18.5)	68 (44.4)	34 (22.2)	23 (14.8)	2.7	1.8	Agreed
3	Electronic databases	34 (22.2)	77 (50)	26 (16.7)	17 (11.1)	2.8	1.3	Agreed
4	Repositories	31 (20.4)	74 (48.1)	28 (18.5)	20 (13)	2.8	1.5	Agreed
5	Reference section	48 (31.5)	82 (53.7)	6 (3.7)	17 (11.1)	3.1	2.4	Agreed
6	Research/Knowledge common	51 (33.3)	65 (42.6)	23 (14.8)	14 (9.3)	3.0	1.8	Agreed

The study assessed sources of information resources in the library. The result showed agreed with all the items. This was used to elicit response on the sources of information sources to establish the sources of information known to the respondents. The responses showed that they are recognized in hierarchy order reference section (3.1), research/knowledge common (3.0), document section (2.9), electronic databases (2.8), repositories (2.8), and archival section (2.7). This response shows that the respondents understand the importance of the reference services

especially in this era of information explosion. Importantly, they agreed with all the items showing that they have knowledge of the varied sources of information in the library, which is an important information literacy skill, which is broadly defined as a conscious effort or approach, or decision-making to solve a problem or achieve an objective [13]. Therefore, knowing the right source to acquire information for solving an identified information need is important as indicated by the respondents.

Table 4. Retrieval skills of students.

SN	Items	SA	A	D	SD	x̄	±	Remark
1	The catalogue bears information needed to locate information resources.	42 (27.3)	93 (60.6)	9 (6.1)	9 (6.1)	3.09	2.2	Agreed
2	Browsing the shelf requires proper knowledge of the particular library classification scheme.	51 (33.3)	70 (45.5)	23 (15.2)	9 (6.1)	3.06	2.6	Agreed
3	Electronic databases serve as supplement to local resources.	74 (48.5)	42 (27.3)	28 (18.2)	9 (6.1)	3.18	2.9	Agreed
4	Not all credible information exists on the open web.	42 (27.3)	79 (51.5	19 (12.1)	14 (9.1)	2.97	2.9	Agreed
5	Knowledge of the sections where special information resources are housed is a requisite knowledge to retrieval process.	42 (27.3)	56 (36.4)	37 (24.2)	19 (12.1)	2.79	2.5	Agreed
6	The library helps undergraduates develop research, critical analysis, and information literacy skills.	32 (21.2)	70 (45.5)	37 (24.2)	14 (9.1)	2.79	2.7	Agreed
7	The library serves as a starting point or 'gateway' for locating information for my research.	9 (6.1))	14 (9.1)	60 (39.4)	70 (45.5)	1.76	3.1	Disagreed
		Weighted mean score				2.8		

Table 4 above shows the responses on information retrieval skills. The mean scores obtained showed that the respondents agreed with items 1 to 6 (The catalogue bears information needed to locate information resources – 3.09, Browsing the shelf requires proper knowledge of the particular library classification scheme – 3.06, Electronic databases serve as supplement to local resources – 3.18, Not all credible information exists on the open web – 2.97, Knowledge of the sections where special information

resources are housed is a requisite knowledge to retrieval process – 2.79, and The library helps undergraduates develop research, critical analysis, and information literacy skills – 2.79), while item 7 (The library serves as a starting point or 'gateway' for locating information for my research – 1.79) was disagreed with. This portrays the erroneous tendency that everything is on the web displayed by most students in information seeking and retrieval processes.

Table 5. Knowledge of anti-plagiarism.

SN	Items	SA	A	D	SD	x̄	±	Remark
1	Acknowledging authors of document used in research is not optional.	32 (21.2)	70 (45.5)	37	14	2.8	1.8	Agreed
2	Citations does ensure scientific thoughts and better result reporting.	9 (6.1)	14 (9.1)	60	70	1.8	2.8	Disagreed
3	Citations does support scholarly fact.	14 (9.1)	37 (24.2)	79	23	2.3	1.9	Disagreed
4	Citations does necessarily ensure originality of intellectual property.	37 (24.2)	65 (42.4)	28	23	2.8	1.2	Agreed
5	Citations does guarantee credibility of sources used in research.	32 (21.2)	32 (21.2)	46	42	2.4	2.2	Disagreed
		Weighted mean score				2.4		

Plagiarism has been a major issue of research-writing. Table 5 assessed the knowledge of the respondents on anti-plagiarism tools using constructs associated with anti-plagiarism. The findings show that the respondents agreed with items 1 and 4 (Acknowledging authors of document used in research is not optional – 2.8 and Citations necessarily ensure originality of intellectual property – 2.8), and items 2, 3, and 5 (Citations ensure scientific thoughts and better result reporting – 1.8, Citations support scholarly fact – 2.3, and Citations guarantee credibility of sources used in research – 2.4) were disagreed with. From the finding, it is evident that the respondents do not fully appreciate acknowledging authors of work they consulted in the course of their research.

5. Conclusion

The study examined implementation of information literacy in higher institutions as an important skill needed for lifelong learning. This outcome is expected to emphasize the importance of information literacy and the far-reaching role it plays in developmental process through the accessibility and utilization of credible and timely information and ultimately the application of information towards human capacity and societal development. The findings show that while the respondents are aware and knowledgeable about the

strategies and roles of librarians in teaching information literacy, and are sources of information, they do not appreciate the full extent of information literacy skills by acknowledging the works of authors consulted during research. This shows that depreciating library use behaviour exists. It is evident that most library users in the selected higher institutions of the three geopolitical zones in Nigeria under study, do not appreciate the role of library services in equipping them with information literacy skills. Consequently, it is concluded that there is still the need for increased awareness on information literacy programme. Based on this, it is recommended that librarians should focus on library user behaviour and not only on the number of collections in their holdings. Similarly, librarians should embark on massive information literacy campaign. Finally, library use instruction should be introduced in higher institutions as a general course made compulsory for students in higher institutions in Nigeria as an enablement for lifelong learning skills.

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