Information Literacy Skills: Effective Tools for Equitable and Quality Education in the 21st Century

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Abstract

This paper examined information literacy skills as effective tools for equitable and quality education in the 21st century. Information literacy skills such as searching, retrieving, utilising, storing and disseminating of electronic and digital born or converted (created) information resources in an ethical manner in this digital age are basic and fundamental to any productive activities including university education. The paper review covered the following sub-topics: information literacy skills; need for equitable education information literacy, role of information literacy in education, effect of information literacy in achieving equitable education

and the state of information literacy education in Nigerian universities. It concluded that information literacy skills are the pivots upon which equitable and quality education is hinged. The paper recommended the following among others. One, the National University Commission (NUC) should centrally review and harmonize the curricular of various universities with the hope of infusing more of information literacy courses with the goal of reflecting the current trend in the digital age. Moreover, Nigerian Library Association (NLA) needs to formulate or adopt a national information literacy standard that will help develop information literacy skills necessary for survival in the knowledge society.

Keywords: *Information Literacy Skills; Tools; Equitable and Quality University Education; 21st Century*

Introduction

Universities across the globe including Nigeria are established to facilitate equitable and quality teaching, learning, research and community services. Their modes of operation are centered on knowledge creation, innovation, extending the frontiers of research and information dissemination for the overall development of the society. The 21st century has been proliferated with the development and use of Information and Communication Technology (ICT) as well as integration of information that were hitherto accessed through traditional means such as books, journals, conference proceedings, dictionaries and other information resources to digital technologies and electronic information resources such as e-books, e-journals, CD-ROM databases, online databases, Internet, e-zines, e-theses/dissertations, among others; which are the direct consequence of the ICT revolution. This development has indeed posed challenges to how information is accessed and utilised, hence, special skills known as

information literacy skills are required for the aim of achieving quality and equitable education in the information age.

United Nation Educational, Social and Cultural Organisation (UNESCO) in its Information for All Programme (IFAP) as cited by Catts and Lau (2008) stated that information literacy is the capacity of people to recognise their information needs; locate and evaluate the quality of information; store and retrieve information; make effective and ethical use of information and simultaneously apply information to create and communicate knowledge. Ojedokun and Lumade (2015) on the other hand, define it "as the ability to locate, evaluate, manage and use information from a range of sources not only for problem-solving, but also for decision making and research". The American Library Association (ALA) (2008) opines that, an information literate individual would be capable of: determining the information needed; access the needed information effectively and efficiently evaluate information and its sources critically; incorporate selected information into one's knowledge base; use information effectively to accomplish a special purpose; and understand the economic, legal and social issues surrounding the use and access of information ethically and legally.

Determining the information needed is the most important competence expected of every individual. This entails the need to understand the information he/she needs in carrying out research and other educational activities. Searching and retrieving the most relevant information depends to a large extent on identifying the information needs. Having identified the information needed, an individual must have the ability to access the information which entails searching through different resources in order to lay his/her hands on a variety of information resources. Retrieving information is not enough, until such information is subjected to rigorous evaluation in order to sort the relevant from the irrelevant materials. Having evaluated the information, the

individual must as a matter of necessity can use and communicate the information in an ethical manner or in the right manner, especially, through various channels of scholarly publication media.

It can be inferred from the foregoing that it is imperative for individuals to conduct research activities to be productive in their various fields of endevour. This can only be achieved if they are information literate, especially in this era of information revolution where vast amount of information is available in different formats especially the electronic ones. Ajibola (2011) warns that, information literacy skills are required in order to gain access to the vast amount of information that are available because of the constant changes in the volumes and formats of information as a result of constant technological changes. Similarly, Okuonghae and Osamiefan (2016) corroborate this view that, there is the need for individuals to be fully armed with the appropriate skills that could be used to access and evaluate information emanating from the Internet, online databases, e-journals and e-books among others.
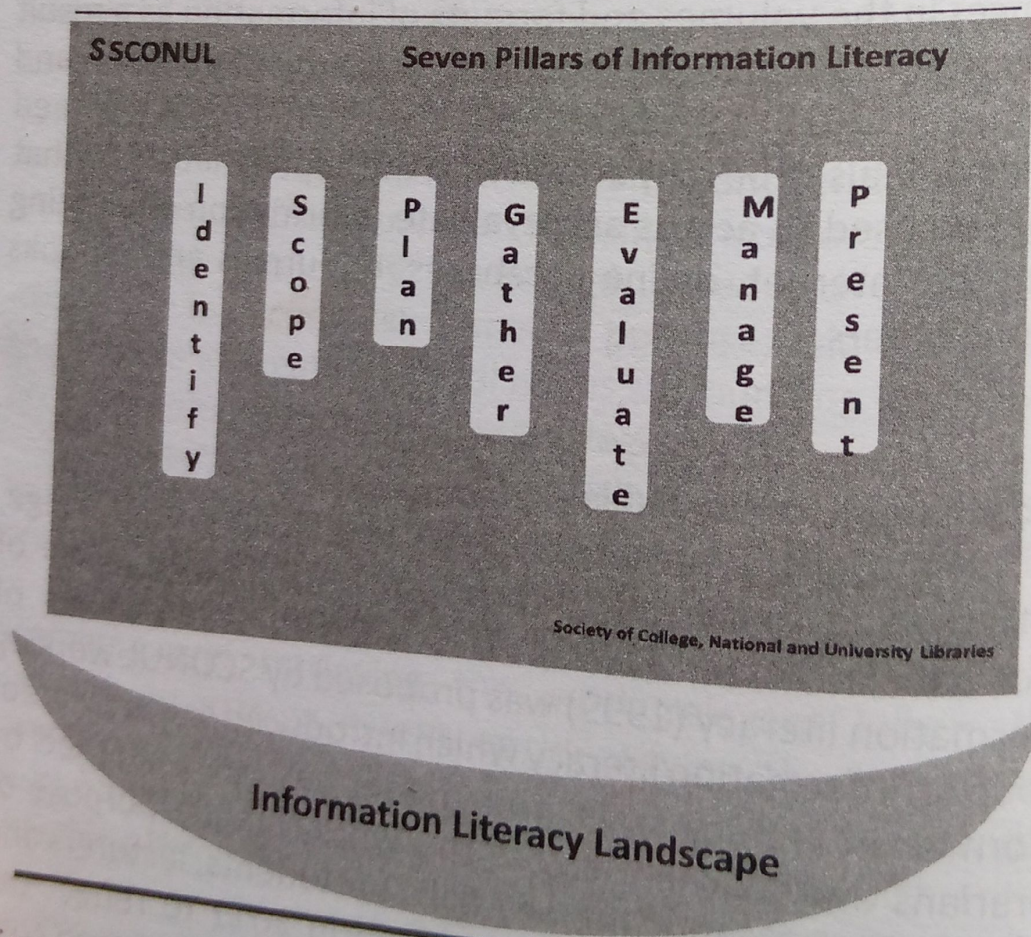
Information Literacy Skills

This paper is anchored on the Society for College, National and University Libraries (SCONUL) seven pillars of information literacy (1999). The SCONUL seven pillars of information literacy (1999) was proposed by SCONUL working group on information literacy which introduced seven pillars of information literacy skills. This model has been adopted by librarians and teachers across the world for the purpose of delivering information literacy skills to students, lecturers and researchers. The model was updated in 2011 to reflect the range of different information sources which was tagged core model for higher education.

The 21st Century and its exponential developments

have made information literacy an essential tool for survival. Information users are categorised into two: digital citizens and digital migrants. The digital citizens are the younger generation who were born during the digital age where digital technologies were developed, and this category of users grow to embrace it. The digital migrants on the other hand, are the adults who were born and brought up before the advent of ICT and other digital resources, but they can embrace and apply the technology in their operations. Be it as it may, the society demands every individual regardless of educational status, age, marital status, religion, ethnicity, etcetera, to be information literate. SCONUL has recommended the seven pillars of skills / competencies which are explained as follows.

S SCONUL   **Seven Pillars of Information Literacy**

Identify | Scope | Plan | Gather | Evaluate | Manage | Present

Society of College, National and University Libraries

Information Literacy Landscape

Source: Society for College, National and University Libraries (SCONUL) (1999)

Identify: This is the first pillar of the SCONUL's seven pillars of information literacy. This entails the ability to identify information need by an individual. The extent of information retrieved depends to a large extent on the ability to identify the needed information by the user and articulate current knowledge on the topic. For students to be able to retrieve information for their research and learning, they must be able to identify the gap in knowledge and think of the terminologies to use in searching information for their use.

Scope: This is the second pillar of the SCONUL's seven pillars of information literacy. Having identified the needed information, an individual must have the ability to understand the types of information available, the different sources of information in different formats, especially in electronic formats. With this skill/competency, students must be able to understand the current information in their areas of specialisation, be able to have access to them through different search tools and use new tools for searching as technologies are constantly developed. They need to search the needed information from general to specific.

Plan: This is the third pillar of the SCONUL's seven pillars of information literacy. Having identified the needed information and the scope, an individual must be able to formulate various strategies for locating the needed information. There is the need to be able to formulate appropriate keywords and controlled vocabularies for searching the needed information. Library users carry out researches to solve variety of problems; hence, they need to strategise in their information search so as to retrieve the appropriate information that would aid in their researches.

Gather: This is the fourth pillar of the SCONUL's seven pillars of information literacy. This entails the ability to locate and access the information that an individual needs. SCONUL stated that individuals must be able to use range of information retrieval and resources using different electronic as well as online resources. With this information literacy competency, library users could be able to access variety of current and relevant information regardless of formats.

Evaluate: This is the fifth pillar of the SCONUL's seven pillars of information literacy. This is the ability of individuals to sort relevant from irrelevant information. They must be able to evaluate information to ascertain issues of quality, accuracy, relevance, bias, reputation and credibility relating to information. Lecturers and students in universities are generators of knowledge, hence, they must be able to appraise every bit of information they retrieve before putting it in use to ensure that the information retrieved is in consonance with the need and the aspiration of the users. This is necessary especially now that there is information explosion in this digital age. Moreover, not every piece of information is relevant nor could be relied upon for quality teaching and research.

Manage: This is the sixth pillar of the SCONUL's seven pillars of information literacy. This entails the ability to organise information professionally and ethically. A library user conducting research must be able to acknowledge appropriately the information retrieved through bibliographic citation. Where the information is retrieved online, the Universal Resource Locator (URL) must be cited properly. Library users must exercise a high level of academic integrity when conducting their researches and be conscious of ethical issues such as information integrity, plagiarism, data protection, copyright as well as intellectual property among

others.

Present: This is the seventh pillar of the SCONUL's seven pillars of information literacy. This entails the ability to communicate information through variety of sources to professional colleagues and others. Library users must be able to present the results of their research findings through the traditional publishing channels such as journals, conference proceedings and technical reports, as well as through digital technologies such as blogs, wikis, social media, etcetera. In other word, an individual should have the competence/skill to disseminate information to others, especially now that electronic information resources are available and can be accessed by other users remotely.

The researchers consider SCONUL's seven pillars of information literacy as relevant to this paper in the sense that, the identified skills and competencies are fundamental in the ability of an individual to effectively and efficiently utilise information resources. Utilising such important information can ultimately result in quality teaching, research and learning, which are the basis for quality and equitable education. Without the skills highlighted by SCONUL, the library users might not be able to exercise their educational responsibilities in this competitive information society.

Need for Equitable Education and Information Literacy

Education is regarded as the forerunner and precursor of development in any society. It is one of the fundamental human rights of the citizenry regardless of age, sex, religion, tribe and social status. Therefore, governments at all levels are mandated to provide equitable education to both rural and urban populace, as every societal's development depends to a large extent on how educated all the categories of people are. Universities in Nigeria are established to facilitate equitable teaching, learning, research and community services. Their

main missions are centered on knowledge creation, innovation, extending the frontiers of research and information dissemination for the overall development of the society. Albert (2010) contended that philosophically, university education is meant to provide general education that prepares the individual for entry into the government, profession, business and the industry, or provide the individual with opportunity for postgraduate study. The general education given within the university provides opportunity for individuals to continue to pursue knowledge within and outside the university. It provides for lifelong learning through critical intelligence.

Similarly, Ezinne (2010) observed that the realities of university educational test significantly to the fact that the university library plays a critical role in the ideals of educational reform and attainment of the educational goals. The intent of university education is to inculcate in students the skills for learning independently in the absence of the teacher. Ezinne (2010) suggested further that it is necessary for the first year undergraduate students to acquire the necessary skills for locating information in the library as well as the information literacy skills and use of library instruction should be more of project work, demonstration and assignment to enable students acquaint themselves with the use of the library search tools.

Fields as cited in Aziagba and Akpan (2010) called for the designing of information literacy assignment and curricula development with emphasis on prior knowledge of the information users as it will help them increase their self-efficacy in the information search. Nevertheless, information literacy skill is a phenomenon affecting the performance of university postgraduate students. Oghuvwu and Elekwa (2008) in a paper entitled "Importance of information literacy in the Information age" affirmed on the need for a new model of learning that is based on the information resources of the

real world and learning that is active and integrated, not passive and fragmented.

Role of Information Literacy in Education

The information literacy skills are fundamental in ensuring that individuals excel in their educational pursuits, as these skills prepare them to be information independent and become lifelong learners in the society. The development of information in digital media coupled with ICT revolution in the last decades has impacted positively on education at all levels. These developments have placed a demand for special skills on the part of users especially students to become relevant in all their educational activities. These skills would enable them utilise variety of information resources within and outside the library environment, in such a way that information could be searched, saved and consulted at later date and, allows multiple access to information resources at a time. Therefore, governments at all levels are expected to integrate the knowledge of information literacy into academic programmes so as to make people become more productive and equipped as functional global citizens of the 21st century (Rodney-Wellington, 2014). The provision and efficient use of information resources in university libraries are central to any meaningful research, teaching and community services by faculties in the universities (Belay and Bramo, 2017).

The extent of research activities depends on the quality and relevance of information resources at their fingertips as well as the ability to search, retrieve, evaluate, use and communicate information in an effective manner through the use of electronic and digital technologies. A major consideration in getting information is the quality of information gathered from various sources. For instance, information from one source, such as the Internet could be verified by information from other sources, such as published

literature and books (Haliso & Toyosi, 2013). Qu, Simes and O'Mahony (2016) state that, research and development regarded as the key of knowledge capital, could serve as source of significant domestic technological change. It could also lead to technologies that can be adopted in production of goods and services, and enhance productivity in organisations, institutions and the nation at large.

However, for quality research productivity to be achieved, faculty need to be information literate in terms of the abilities to search, retrieve, evaluate, use and communicate information ethically. They must also be able to utilise various electronic information resources, such as e-books, e-journals, CD-ROM databases, online databases, Internet, e-zines, e-theses/dissertations, among others; which are the direct consequences of the ICT ubiquitous revolution. Undoubtedly, digital age has ushered in global facilitation of access to information using computers, Internet and the networked environment (Bassey & Odu, 2015)

Effect of Information Literacy in achieving Equitable Education

Information literacy skills are weapons that could be used in developing literature search skills among the students in retrieving literature related to their topics of interest from various information resources. Information Literacy Instruction (ILI) provides students with a framework on how to access and use information required for their academic and research activities (Jessy, Shivananda & Mahabaleshwara, 2016). Libraries offer ILI to its users in the form of lectures, workshops, conferences, online courses, webinars, etcetera. Information literacy skills help the students to become independent in finding solutions to the problems that they encounter during their learning (Sasikala & Dhanraju, 2011). This would eventually assist the students to become creative,

analytical and efficient as lifelong learners. The increase in the number of electronic resources, the differences in features and functionality between them and complexity in searching the electronic information resources necessitate making information literacy programmes core courses in universities. The changing nature of position of libraries and responsibilities makes it necessary to continuously recalibrate the library instructional programmes. An information literate person today should possess specific online searching skills such as the ability to select appropriate search terminology, logical search strategy and appropriate information evaluation (Amusa, Bello, Omotoso & Osunrinade, 2016).

In addition, Doyle as cited in Ajegbomogun and Ajegbomogun (2015) described an information literate person as one who recognises the need for information; sees accurate and complete information as a 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; organises information to integrate new information and uses information in critical thinking and problem solving. Adeleke and Emeahara (2016) find a significant relationship between information literacy and the use of e-information resources. Chinyere (2014) observe that the user education instructed and equipped the library users with the skills that enabled them to be independent in searching literature and helped them to retrieve the needed information. Sasikala and Dhanraju (2011) show a lack of awareness of the usage of library catalogue, a lack of search skills and a gap in the knowledge of using web search tools. The study observed that user education programmes offered by the library would enable the users in searching and finding the needed information with ease.

Issa, *et. al.* (2015) observe that for mastering the ability to recognise, locate, evaluate and acquire the needed

information, the students needed to be information literate. Bhattacharyya (2009) argue that information literacy programmes should be embedded in the regular classroom activities in all types of academic institutions and that both the teaching faculty and librarians should become essential components of such programmes. Anyaoku (2016) felt that knowledge of information literacy could enhance the academic performance of students as well as their performance on graduation.

The State of Information Literacy Education in Nigerian Universities

Realising the indispensability of information literacy in bequeathing an equitable and quality education, the National Universities Commission (NUC) had in the last decade reviewed the universities' curriculum to reflect the use of library as a course under general studies. This is aimed at inculcating the abilities to search, access, retrieve, evaluate and use variety of information resources for immediate and lifelong learning. In the reviewed curriculum, a two (2) credit unit was assigned to Use of Library, Study Skills and Information Communication Technology (ICT). However, universities are yet to fully implement this policy to develop formalised information literacy-imbued education programme. Many librarians who are involved in information literacy training focus on use of library skills. This content is usually subsumed under the umbrella of the Use of English course of General Studies Departments of the universities concerned. Attama and Igwe (2015) describe information literacy education as a missing link and neglected ingredient in the educational system of Nigeria in the 21st century. The authors noted further that the teaching of Use of Library as an insignificant part of Use of English is not only out-dated, but also no longer acceptable in this information driven era. They

noted with serious concern that librarians of some universities and polytechnics are not even given the opportunity for its delivery; rather both the Use of English and the Use of Library contents are left in the hands of English lecturers to teach. Anyaoku (2016) suggests that national standard is the prerequisite tool that is needed to make information literacy education a programme capable of meeting the information needs and knowledge acquisition of the 21st century students in Nigeria.

Conclusion

It has been established in this paper that information literacy skills are effective pivots upon which equitable and quality university education in the 21st century is hinged. This is the major reason amongst others why new entrants into the universities are usually given appropriate intuition through professional pedagogical means that are geared towards enhancing their academic productivity. If students know how to search, retrieve, store and disseminate relevant, current, up-to-date information in the information driven era, their academic performance under normal circumstances would receive a big boost.

Recommendations

Having established the imperatives of information literacy skill to the attainment of quality and equitable education in Nigerian universities, the following recommendations are hereby made:

1. The National University Commission (NUC) should centrally review and harmonise the curricular of various universities with the hope of infusing more of information literacy courses so as to reflect the current trends in the information driven age.

2. Nigerian Library Association (NLA) must formulate or adopt a national information literacy standard that could help develop information literacy skills that are required for survival in the knowledge society.

3. More funds should be allocated to university libraries for acquisition of modern information literacy instructional equipment that would assist in providing information literacy education in line with global best practices

4. The information literacy education should be geared towards more of practical cum technical application as opposed to mere theoretical knowledge.

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