Information Literacy in Nigerian Academic Environment

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ABSTRACT

This paper examined information literacy as catalyst to transforming the information society. The required information literacy skills – Task, definition, Information seeking strategies, Location and access, Use of information, Synthesis, and Evaluation (TILUSE) are discussed. Information Literacy skills training at the University of Ibadan Library, Nigeria is discussed.

Introduction

According to UNISIST (2003), 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 problem on hands. It is a prerequisite for participating effectively in the information society and is part of the basic human life long learning. According to Doyle (1992), an information literate person is one who:

- Recognizes the need for information;
- Formulates questions based on information needs
- Identifies potential sources of information;
- Develops successful search strategies;
- Accesses sources of information, including computer bvased and other technologies;
- Organizes information for practical application;
- Integrates new information into an existing body of knowledge; and
- Uses information in critical thinking and problem solving.

Being information-literate, according to (ALA, 1989), requires knowing how to clearly define a subject or area of investigation, selecting the appropriate terminology to express the concepts or subject, formulating a search strategy, analyzing the data collected for value, relevancy, quality, and suitability, and subsequently turning information into knowledge.

Writing on the impact of information literacy on students, ALA (2004) reports that to take fullest advantage of problem-based learning, students must use critical thinking skills, requiring them to become skilled users of information sources in many locations and formats, thereby increasing responsibility for their own learning. The report elaborates that gaining information literacy multiples the opportunities for students' directed learning. Information literacy is a key component in lifelong learning that extends learning beyond the classroom.

Information literacy skills open the gateway of information to students and all information seekers and users across disciplines. It is a way of exposing users to the world of knowledge. It helps students know when information is require, how to locate, evaluate, organize, and effectively create, use, and communicate it. It is a way of nurturing and sustaining lifelong learning.

In developing countries, information literacy has not been accorded the necessary recognition in the higher education curriculum (Ojedokun 2005). In Nigeria the supervisory organ for universities, the National Universities Commission (NUC), makes it mandatory for all universities in Nigeria to include library literacy course in their curriculum (Noah, 2004). It is unfortunate that as food and lofty as the NUC directive is, only few universities have paid serious attention to it and offer it as a credit-earning course. While many universities offer information literacy as a non-credit-earning course, others have library orientation. Some universities cluster it with other General Studies courses, and in the few universities that offer it as a credit-earning course, the unit and status of the course is not enough to achieve the desired results. While it is required in some universities, it is an elective in others. The time and space allotted to the course is not sufficient for students to grasp the salient points.

In many universities that offer the course for credit, the emphasis is on library and reading skills with utter neglect of computer and technology literacy.

The situation is not peculiar to Nigerian universities; it also affects other universities in the developing countries. The report of the survey of information-seeking habits of graduate students of the University of Ghana by Badu (1991) revealed that there is a low level of understanding of the library

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and little use bibliographic tools. He concludes that the course content and duration of the programme and the lack of knowledge of the concepts and the low use of library resources by students show that the programme as it is presently pursued is a waste of time. He recommends that the user education programme be integrated in the school curriculum.

Dulle, (2004) reveals that most universities in the developing countries practice mainly user education and library orientation, most of which lack the capacity to produce information users who exhibit adequate information literacy attributes.

From the foregoing it is clear that there are information literacy practices among the universities in the developing countries but emphasis is on library literacy skills but lose sight of what the new technology offer with respect to information literacy.

Information Literacy, Information Technology, Computer Literacy, and Library Skills

Many people mistake information literacy for information technology literacy, computer literacy, or library literacy skills. Information literacy goes beyond these other sets of skills (National Research Council 1999). According to Shapiro and Hughes (1996), information technology literacy is the ability to continually adapt to and use innovations in information technology. It helps to understand the human, organizational, and social context of technologies as well as criteria for evaluation (Ojedokun, 2007). Library literacy skills are concerned with how to retrieve, evaluate, and use information resources in the library. Information literacy skills focus on contents, communication, analysis, searching, and evaluation, independent of particular technologies (ALA, 2004).

Gilton (1994) observes information literacy goes beyond technology, since technology alone does not guarantee quality learning experience. Information literacy is not a technique, but a goal for learners.

One reason that universities are established is to train a high-level workforce. ALA (2004) describes producing lifelong learners as critical to the mission of educational institutions. Ubogu (2006) asserts that the mission of academic libraries includes helping produce students who are information literate and prepared for lifelong learning. As students become active learners, emphasis will shift from a teacher-centred to a learner-centred learning environment.

Information literacy in a learning environment

The second century information age is a product of advancements made in information and computer technology. This is a time in human history when information is made available through several media. However it is important that information presented to one be critically evaluated, analyzed and its efficacy determined. To do this, one needs to be information literate.

The American Association of School Librarians (AASL), a division of the American Library Association (ALA), describes the information literate as one who accesses information efficiently and effectively. He/She evaluates information critically and competently, uses information accurately and creatively, pursues information related to personal interests, appreciates literature, and other creative expressions of information, strives for excellence in information seeking and knowledge generation, recognizes the importance of information to a democratic society, practices ethical behavior in regard to information and information technology and participates effectively in groups to pursue and generate information.

In its (ALA) Presidential Committee on Information Literacy Final Report it states that the information literate person must *be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information. ... They know how to learn because they know how information is organized, how to find information and how to use information in such a way that others can learn from them. They are people prepared for lifelong learning because they always find the information needed for any task or decision at hand.*

Information Literacy – the Catalyst for transforming the information society of today into the learning society of tomorrow

While many of today's educators are concerned about learning activities that require engagement with today's ICT environment, it is attention to information practices that are fundamental to effective information use. It is bringing these information practices into the curriculum, and ensuring that students have the capabilities to engage in, and reflect upon such practices that constitutes information literacy education.

The significance of information literacy education lies in its potential to encourage deep, rather than surface learning, and in its potential to transform dependent learners into independent, self directed, life long learners. Without information literacy, people are condemned to lack of information, dependence upon others for access to knowledge and information, and even to acute levels of information anxiety (Wurman, 2001).

Brevik (1998) described the importance of information literacy education for lifelong learning. She stresses the need for students to move "from the dominant paradigm of prepackaged information in the form of textbooks, lectures, and even artificially constrained multimedia resources, to facilitating active learning using real world information resources". She concludes by saying:

> *The effects of prepackaging of information are most obvious in the school and academic settings. Students for example, receive predigested information from lectures and textbook, and little in their environment fosters active thinking or problem solving... Education needs a new model of learning – learning that is based on the information resources of the real world and learning that is active and integrated, not passive and fragmented... What is called for is not a new information studies curriculum, but a restructuring of the learning process. Textbooks, workbooks, and lectures must yield to a learning process based on information resources available for learning and problem solving throughout people's lifetimes. (Brevik, 1998, pp. 127, 128).*

The use of real world learning resources supports *learning to live together, effectively bringing the world into the classroom, or taking the classroom into the world.* The use of ICT's has the potential to link students to the rich histories, cultures and traditions of the world in a way previously out of reach. Using information to learn is also essential to learning to know as learners seek out knowledge from the exploding range of resources available to them and develop a critical appreciation of the relative value of those resources. Bringing the information practices of the real world into the curriculum *supports learning to do,* as learning experiences are designed to introduce learners to the kinds of information practice that will support professional and civic and personal life. *Learning to be is the fourth pillar which is the emphasis on critical and creative thinking, communication, teamwork, and wisdom that are integral to an information literacy education (Delars, 1996).*

A study conducted by Louise and Limberg, (1998) revealed that different ways of experiencing the information seeking and use process may have a significant impact on the outcomes of learning. It also showed the importance of taking a holistic approach to teaching and learning information literacy. Within the groups of students participating in the investigation, three different ways of experiencing information seeking and use were identified. For some, information seeking was experienced as fact – finding or finding the right answer. These students wanted information that was easy to access and disregarded what they considered to be biased information because of lack of facts. The students therefore acquired a fragmentary knowledge. This approach to information seeking and use was associated with impoverished learning outcomes. Others experienced information seeking and use as balancing information in order to choose. These learners interpreted the information process as involving finding sufficient information to allow them to form a personal standpoint on a controversial issue. The third approach includes students whose approach of information seeking and use is in form of scrutinizing and analyzing. The students sought to understand through critically analyzing and evaluating information sources.

Fitzgerald and Galloway (2001) provide another example in the digital information terrain. They observed some students using the online environment to carry out their assignment and research projects. The students participating in this project were using the Internet, and a virtual library. Many of the students could not conceptualize the boundary separating the virtual library and the Internet. They had difficulty differentiating the virtual library from internet services, or even the virtual library from OPAC (Online Public Access Catalogue). The use of CD-ROM database was also difficult for some of them when conducting their different searches. They sometimes could not know the different databases to use according to their various disciplines. The findings revealed the need for teachers and learners to work together to understand each other's ways of seeing the information landscape, both digital and non-digital, formal and informal, as well as other elements of information use. The study also showed that as students engage in information use, they acquire particular ways of seeing, some of which may be more powerful, or more appropriate, than others. Teachers can design learning strategies, which reveal these ways of seeing, and facilitate the acquisition of those, which are more helpful to the context. Though some sophisticated models have been designed to help experienced users in their various searches, it is necessary to have very easy models designed for beginners or younger ones.

A reflective model designed by Edwards and Bruce (2000) showed that it is not technical skills that make effective internet users, but rather the reflective and conceptual capabilities that are part of the character of the information literate. The model also showed that using the skill – based approach/ method while using the internet is not as reflective or grasping and effective as the approach to teaching and learning the internet. The reason is that the skill based approach lacks power because of the changing nature of both the technology and Internet content. The learning and teaching approach emphasizes the reflective competence and the ability to continue to learn in the face of change establishing capabilities that are intended to empower learners to move forward into an unknown future.

Information literacy education therefore has the power to transform the learning process into one that will empower learners, and give them the capacity to engage in self-directed lifelong learning outside the walls of the formal educational process.

How then can information literacy be adopted as a key feature of the curriculum in all sectors/subjects? Suggestions from different researchers and scholars (Ojedokun, 2007; Bruce, 2007) include the following:

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- **Cultural change, change in educational values**

This involves movement from a content orientation to a process orientation to teaching, shifts from a teacher – centered to a learned –centered view of learning, and an increased emphasis on understanding the perceptual world of students and their pedagogical implications.

- **Establishing policy guidelines**

Internationally and nationally, of fundamental importance are policies and guidelines regarding basic levels of information technology infrastructure and the need for an information literacy education program in schools. Guidelines and policies for teacher education, and the establishment of information literacy education programs, also should be dealt with at this level. National policies and guidelines targeting information literacy education and associated infrastructure in the wider community can only support such an emphasis on the educational system. At the institutional level, policies need to support information literacy education in order to support or facilitate a flow into staff development and curriculum initiatives. It is critical that institutions promote an integration of information literacy with the underlying values and philosophies of the educational institution.

- **Teacher education and staff development**

Professional education and staff development programs for teachers and information specialists should be organized in form of workshops and seminars based on information literacy education. It is important that such programs communicate with teachers, information specialists and managers about the character of information literacy, and draw up their own life experiences to help them understand the importance of information literacy to learner development.

There are some difficulties and obstacles often associated with these programs namely:

(1) The difficulty of understanding that information literacy is not a prerequisite to learning but rather a way of actualizing a way of learning. (2) The obstacle of modifying, changing, or constructing new designs for learning experience. (3) The difficulty of changing how much we expect students to learn since it is mainly the ability to learn that is paramount. (4) The obstacle of technology, learning to use technology, and learning to use technology to support learning. The role of education for teachers, information specialists, and managers at all levels of education is critical to global information literacy education initiatives.

- **Partnerships between key personnel**

Information literacy education is not possible without partnerships. Students, information specialists, IT specialists, curriculum designers, community organizations, teachers, etc need an awareness of the value of information literacy, and all need to collaborate to make possible learning experiences that facilitate information literacy. No single group of people or individuals can carry out information literacy among students. The responsibility must be shared among different categories operating at various levels. The most important among these partnerships at all levels of education is the collaborative relationships between teachers, information specialists, and students. Librarians are beginning to recognize the need to move away from a library and

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information retrieval centered view of information literacy towards a broader understanding of the role of information literacy and the information professional in fostering student learning. All five areas of partnership: curriculum design, policy development, staff development, research and classroom teaching are required to bring about change.

Information literacy skills

Information literacy forms the basis of a lifelong learning in all subject areas/disciplines and in all learning environment. Within the context of various disciplines, successful information literacy program requires an individual to be able to define a problem, initiate a plan to find information, locate and access resources, use the information, synthesize information and carry out some forms of evaluation. This is generally referred to as the big six: *Task Definition, Information Seeking Strategies, Location and Access. Use of Information, Synthesis, and Evaluation(TILUSE), (Eisenberg and Johnson, 2002)*

Task Definition

The individual first recognizes that he needs information to solve a particular problem. He makes sure he knows the problem to be solved and defines it. He then identifies the type and amount of information he needs to solve this problem.

Information Seeking Strategies

The individual goes about searching for the information he needs from different information sources. It could be Print sources or Online/Electronic sources (databases, CD-ROM resources, Internet online resources, and electronic reference resources) using specific criteria. It is important to develop a plan of searching for information. The searcher could always know what information is needed through a series of sub-questions, e.g. keywords, concepts, subject headings, and descriptors. It is important for the searcher to use more than one source of information.

Location and access

The searcher should locate these sources of information using **information access tools** like indexes and abstracts, catalogues, bibliographies, and web search tools. Searchers can also use people, like information specialists or librarians to help or teach them how to search for information from the different sources. Information can also be obtained by interviewing people associated with the problem you are about to solve.

Use of information

The searcher should then outline the various information he has collected and screen them. The screening process involves reading, studying, viewing, and listening to the information again in the case of oral information by interviews. He should then extract and choose the information that is relevant to his work.

Synthesis

This entails the organization and combination of both the new information collected and already used information in the study. The searcher should be able to incorporate all information available in such a way that they would be understood by future users. He should be able to draw appropriate conclusions from all the information received. Implications and recommendations as a result of the study are part of synthesis. He should be able to produce an original product from this work, for example, a research paper, drama, music, videotape etc. A bibliography and index should be developed. Most importantly the searcher should adhere to copyright law.

Evaluation

The searcher should read over his work to make sure that the information he gathered and compiled has solved the problem he set out to solve (problem statement). He must find out or check if the final product has met the objectives of the study or work. Was the right procedure or methodology used to meet this need? For example were the research questions or hypotheses the right ones for the problem statements? Was the correct statistical method used? The searcher himself can carry out the evaluation but in most cases, it is advisable for a colleague, a teacher etc to do it The searcher should guard against plagiarism. The work should be edited and checked properly for grammatical errors and spelling mistakes. This should be done at the final stage of the work using information literacy skills.

The role of the library and librarians

The library is a point of convergence for many communities, systems, and disciplines that influence access to information. It is the meeting place where those on different literacy levels can find, discuss their information needs, and practice their skills. The library is also an institution where indigenous knowledge content can be organized, preserved, safeguarded and made accessible, recognizing the intellectual property rights in the various regimes. It is a receptive organization for the development and availability of information and communication technology (ICT) infrastructures including print and non-print media, for public access to information.

Librarians and other information professionals need to develop creative strategic actions to meet the challenges faced, in particular, by the developing world's diverse communities and by urban and isolated poor people everywhere. Librarianship is the only profession which is really alert to man information literate citizenry as the prerequisite for personal and democratic empowerment, lifelong learning and societal and economic development (Bundy, 2002).

"Libraries for Lifelong Literacy" (IFLA's Presidential theme for 2003-2005) provides a focus for activities on freedom and equity of access to information, ideas, and works of imagination and freedom of expression. In applying the theme to their own professional development, librarians will enhance their knowledge and confidence to build on the different world views and different literacy necessary for the diverse indigenous knowledge systems and their intellectual property rights regimes. It will also help librarians to develop profession expertise in harnessing ICT's as tools for the delivery of local content. Their support of this theme will enable librarians have a unique opportunity and challenge to consolidate their role as contributors to the information and knowledge society.

Library skills instruction is one of the most important methods used in developing information literacy. Three approaches can be used when carrying out this instruction, namely source, pathfinder and process model. The pathfinder approach requires that students move through a series of pre-established general sources to progressively more specific ones. It has the advantage of allowing a student to develop a background in a specific topic before engaging in additional research. The source and pathfinder approach are both resource-centred views of library skills instruction. Their primary focus is on how to use specific texts, documents and materials available rather on user's individual research needs. The process model approach shifts the primary focus to the user and the information need as articulated by the student.

"Powerful libraries make powerful learners". According to a study conducted by Keith Curry Lance of Library Research Service, four significant findings resulted from the research:- Schools with better staffed libraries have more students who succeed on tests. Students with access to larger more current book collections achieve higher reading, writing and ACT scores

The internet contains a lot of information. Any type of information is available there, but the most important factor is the quality of the material. Society in most cases foes not take time to evaluate the information found, therefore it is important to teach students the techniques on how to determine what is good and what is bad. One of the biggest concerns is how to critically teach students how to evaluate the information they fine on the Internet for its validity. Information literacy becomes valuable here. It should be a topic covered in the first year of college/university and should be fitted into any course.

Who then is better to teach information literacy skills than librarians? Librarians should enhance their information literacy teaching abilities beyond that of basic use instruction to include new kinds of outreach activities, services, and approaches to meet the needs of those with different and multiple literacy.

The Kenneth Dike University Library, Ibadan, Nigeria as an Educational Change Agent

It is clear that changes in the ways teaching and learning take place through information and communications technologies mean changes in the role for academics. Studies have shown for example that although many academic librarians have enough qualification to be able to teach, they

need development in instructional design, curriculum development, teaching and assessment. In a study carried out by the Australian Government – *"Development lifelong learners through undergraduate education, (1994),* it showed that librarians saw their role as undergoing transformation as they themselves became agents of change within the university community. Librarians are operating at the cutting edge of technological developments in identifying the need for, locating, accessing, evaluating and managing information.

In order for this vision to be realized, however, two important changes would be necessary: Academic teaching staff would need to view their role differently, and to see themselves as facilitators of learning; and there would be need to enhance collaboration between academic staff and librarians in the design and delivery of programs. This is often difficult for the academic staffs (teaching) who are often committed to the usual lecturing and giving out of handouts and notes. They are usually not often prepared especially with the undergraduate to make the shift to resource – based teaching in which students has responsibility for their own learning.

One of the most important developments in University libraries of some developed countries like Australia, Europe and America is a national student portal to greatly enhance ease of access to information resources. This is not yet available in most third world countries, but there are other facilities The Kenneth Dike Library, University of Ibadan, Nigeria has that can enhance ease of access of information and could also supply information. Reference sources like Encyclopedia (General and Subject), Abstracts and Indexes, Bibliographies (General, subject, local and in house). Catalogues (General, and subject), Monographs, journals, Government Documents, Africana Collections, Personal Papers, Arabic Collections, Newspapers as far back as the 1950s, P.O. (Publication Ordinance) Collections, Theses and Dissertations. (A yearly Bibliographic Compilation of the Theses and Dissertations) are available for Researchers. These are some of the print sources of information.

The electronic resources include some CD ROM databases like Medline, CAB Abstracts, and Agrs for search in Agriculture, Popline for social Sciences and many others. Subscriptions to some of the database have been discontinued since they are available.

In the Kenneth Dike Library clients are allowed to search the Internet free of charge except for some minimal fee for photocopying and maintenance of the facilities. Gateways to various electronic journals are also available for users of the library especially researchers. Below is a list of addresses and usernames for accessibility of various electronic journals available in Kenneth Dike Library. Passwords are made available to users when they come to search.

Kenneth Dike Library, University of Ibadan, Ibadan provides institutional access to thousands of high quality electronic databases and journal articles for the staff and students of the community through the under listed sources.

ELECTRONIC DATABASES	URL
EBSCOHOST	http://www.nigeriavirtualibrary.com Direct Access Or http://www.nigeriavirtualibrary.com Indirect Access
OARE	http://www.oarescience.org
HINARI:	http://www.healthinternetwork.org
AGORA	http://www.aginternetwork.org
JSTOR	http://www.jstor.org
African Journals Online (JOL)	http://www.ajol.org

The underlisted are other E-Databases available through Kenneth Dike Library, University of Ibadan, Ibadan for teaching and research purposes:

BIOMED CENTRAL

REPEC: RESEARCH PAPER IN ECONOMICS

POPLINE: POPULATION INFORMATION ONLINE

INASP HEALTH LINKS

GLOBAL DEVELOPMENT NETWORK

PUBMED CENTRAL

INASP PERL

ASSR: ARAB SOCIAL SCIENCE RESEARCH

E – JOURNALS

LanTEEAL

Egranary

Information Professionals

Apart from the information sources above, there are information professionals who are available in the library. These include the academic librarians reference librarian, circulation librarian, cataloguers, collection development librarian, systems librarian special collections librarian, the acquisitions librarian and others. Paraprofessionals are also available in the library, as were all

library assistants and attendants. All these personnel are there to help the users in their various searches. The academic librarians are often involved in teaching, and processing of information. Other categories of staff are often involved in assisting users to find information. The technical staff especially those in the systems unit are very much involved in teaching users how to search for information using the computer. Despite the fact that the various gateways have been printed out, some users still find it difficult to locate these addresses. The library staff help out in this instance. The reference librarian who is a senior academic librarian answers all sorts of reference and research questions both from researchers, undergraduates, outside user and many users of the library outside the country. A lot of international clientele request for information from the library and the library is often glad to meet their information need. It is important to include in this paper that clients have come from far away places including Britain and America searching for information that they could not find elsewhere but eventually found in the Kenneth Dike Library!

CONCLUSION

More could be done as far as information literacy is concerned. The university library should be the leading example of information literacy, because in the university system there are students, lecturers, researchers, and librarians and ICT professionals, all interacting in one system and information literacy requires collaboration of all the categories of people mention. The researchers have to cooperate with the librarian who should be ready to help and to reach the researcher how to search for information. The lecturers have to cooperate with the librarians by giving assignments to the students that will involve the use of the library. Students should not depend solely on lecturers and lecture notes. The lecturers should teach in such a way that students have to search and find the information themselves. They should be able to collate, Synthesize, and evaluate the information they find. The lecturer could then collaborate with the librarian by informing him about the assignment he has given to the students, thus preparing the librarian to be available to the students. The librarian does not have to make the information sources physically available to the students but would teach the students how to find the information sources themselves. This is not as simple as it seems. In some cases it could involve rewriting the curriculum. All stakeholders will be involved here and this will thus teach students how to utilize information.

Information literacy is the route to active participation in the information-driven society. It gives students the necessary skills and inculcates lifelong and independents learning skills which are a prerequisite for problem-based and problem-solving learning. The curricula of the universities in the developing countries are deficient in one aspect or the other.

The obsoleteness of the curriculum and lack of computerized library systems are the major indicators for the deficiency in the curricula of the Universities in the developing countries. The inclusion of automated library systems into the curriculum of the university systems in the developing countries is suggested with emphasis on library skills and not on computer literacy alone.

Recommendations

- Information curricula of the university systems in the developing countries should be reviewed and expand to reflect information literacy skills to make the learners truly information literate.
- Enough time, units, and status should be allocated by all the University management in the developing countries to information literacy skill acquisition which must be handled by

librarians. The course should be taught up to at least 200 level and should be made a compulsory foundation course. This will enhance the status of the course and help students take it more seriously

- Design and review of the curriculum and teaching of the information literacy courses should be all-embracing. It should involve all the stakeholders.
- Information literacy should be incorporated into various courses in the curriculum. It is a continuous activity that never ends until one departs this world for learning is unending

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