

INFORMATION LITERACY SKILLS DEVELOPMENT FOR TEACHERS AND STUDENTS

Samson Oyeniya AKANDE

*Kenneth Dike Library,
University of Ibadan, Ibadan.*

Abstract

Acquisition of information literacy skills by teachers and students in this 21st century Information Age is paramount for their all-round success in life. This paper has X-rayed how different authors conceptualised information literacy skills and the role they can play in the academic, professional and personal life of individuals. The process of developing the skills by the teachers and the students through integration of information literacy skills instruction in the school curriculum is well discussed in the paper. The article recommends ways of achieving the goal of developing information literacy skills by teachers and students in Nigerian schools.

Introduction

The exponential growth of information which results in information explosion and its resultant repercussions have attracted a global attention in different fields of human endeavour including the field of library science and its practice in the developed world and the developing countries including Nigeria. The concept of information literacy, which advocates the preparation of people to be successful users of information, addresses the concern librarians have with the evolving nature of information sources and the overwhelming amount of information available for use. Information literacy skills have been identified as necessary tools that students and teachers must possess to be able to navigate the present and future landscape of information. This becomes more essential when curriculum reforms which advocates active resource –based learning is considered.

The global importance attached to information as a vital resource has been well documented in the literature. Such terms as ‘Information Society’, ‘Information Power’ are coined to shed light on the roles information has to play in national development. The Information Society according to UN/

ITU (2005) cited in Akinde (2006) is the society where everyone can create, access, utilize and share information and knowledge, enabling individual, communities and people to achieve their full potential in promoting their sustainable development and improving their quality of life. Without any iota of doubt, curriculum which affords a lifelong learning and provision of a workforce capable of global competition in a knowledge-based economy must consider development of information literacy skills as its integral component. This, however, could only be made possible by a holistic design of Information Literacy Instruction Programmes as a vehicle for teaching information literacy skills to students and teachers.

The United States of America has made a concerted effort in realising information society goals by using his National Education Goals as a framework to demonstrate the critical nature of information literacy. When commenting on one of the goals, Eisenberg, Lowe & Spitzer (2004) stated that the basic focus of education should be to prepare students to be lifelong learners, to know how to learn. Developing the competencies of information literacy requires an active learning process, which requires a paradigm shift for education. Nigeria is not left behind in the global move towards evolving an information society. In fact, as far back as 1981, The National Policy on Education has made it mandatory for the government to provide functional library in our primary and secondary schools. The effort of some state governments including Oyo, in providing computer systems in our schools is a practical demonstration that the government realised the need to equip students with necessary skills fundamental to economic and personal success in the information age. The direct consequence of this is the advocacy for educational restructuring and curriculum reform to pave way for an interactive, self-initiated learning with the teacher as the guide. This will make a sharp shift from the traditional teacher dominated class to resource-based process approach to learning which allows maximum participation of the learner. Restructuring will make information literacy a necessity as students will seek to construct their own knowledge and create their own understanding.

Conceptual Overview and Review of Literature on Information Literacy Skills

Several conceptions and definitions of information literacy have become prevalent. For example, Alexandria Proclamation (2005) sees it as a set of competencies that an informed citizen of an information society ought to possess to participate intelligently and actively in that society. The American Library Association (ALA) presidential Committee on Information Literacy (1989) Final Report identifies the level of skills that an information literate person must possess. According to the report, 'to be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information.

Information Literacy Skills include cognitive skills like critical thinking skills, problem solving skills and decision making skills that are necessary to create new knowledge and to learn how to learn , a key characteristics of those who are information literate (Carr, 2009) . Shapiro & Hughes (1996) in their own definition combine technical abilities, the psychological and social dimensions of information literacy. To them, 'It is a new liberal art that extends from knowing how to use computers and access information to critical reflection on the nature of information itself, its technical infrastructures and its social, cultural, and philosophical context and impact. University of Arizona Library (1996) attempted to give a comprehensive list of the attributes of the information literate people as those who : can recognize that they have a need for information; possess the knowledge and skills that enable them to discover where and how to find the information they are seeking; are comfortable using the necessary tools to find, modify and assimilate that information into another work; and critically evaluate and synthesize the information they find to understand the social, economic, and political implications of the information.

The information age characterized with mammoth information in diverse formats and sources, which are free and fee-based, ranging from print, audio-visuals to electronic and changing technologies make some authors to look at the concept from the angle of the skills in navigating information, critical thinking ability that helps in evaluating and using the information, attitude and the ethical issues regarding the use of

information. The California Academic and Research Libraries Task Force (1997) apart from describing information literacy skills as skills necessary for locating and using information also see it as encompassing knowledge and attitudes related to the ethical and social issues surrounding information and information technology. Equally, Work Group on Information Competence (1995) opines that 'Information Competence is the fusing of the integration of library literacy, computer literacy, media literacy, technological literacy, ethics, critical thinking, and communication skills.

The education that will equip our students with skills that will make them employable in the global labour market must go beyond ordinary basic literacy. It must be education that effectively supports the use of technology for teaching and learning. It should equip technology research tools, to locate, evaluate, and collect information from a variety of sources (ALA, 1989). Little wonder that Eisenberg, Lowe & Spitzer (2004) remark that using information in a variety of formats requires literacies beyond the basic ones of reading and writing. To negotiate complex information formats, we must also be skilled in other literacies like visual media, computer, network, and, of course, basic literacy.

In conclusion, information literacy skills are made up of information technology skills, cognitive skills, the ethical, cultural, social, and attitudinal issues surrounding the use of information.

Conceptual Model for Information Literacy Skills

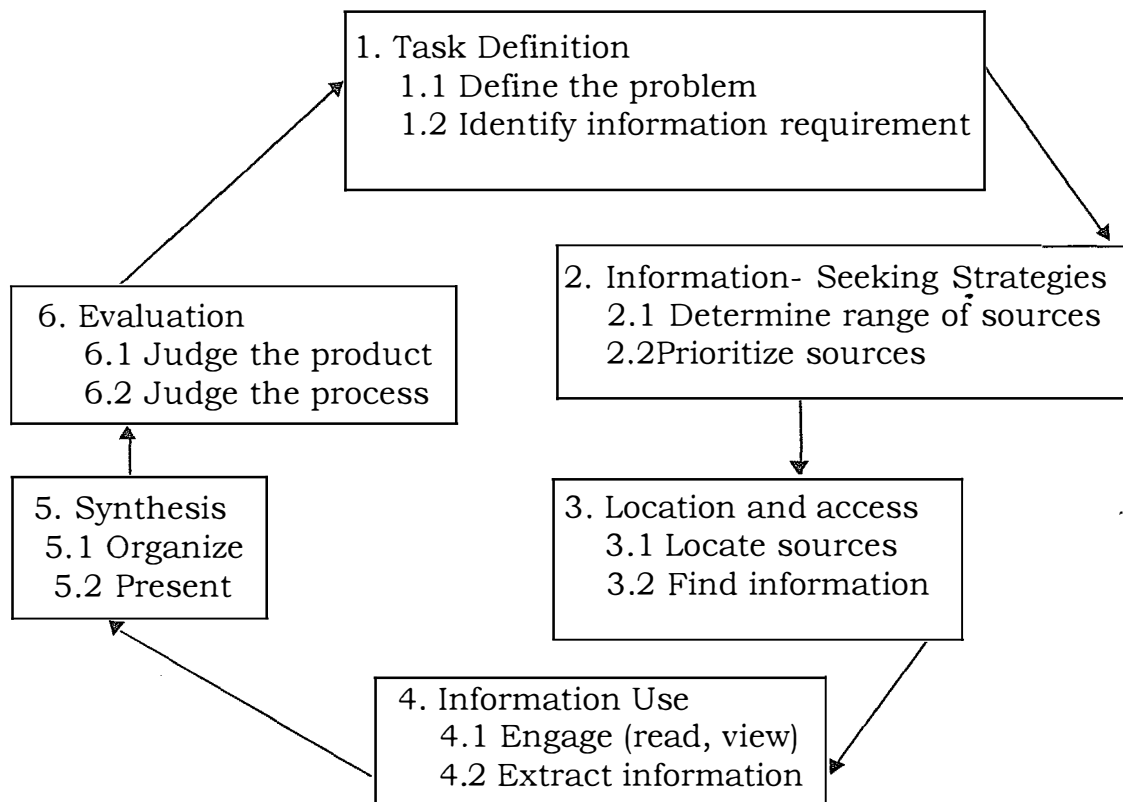
Information literacy is a process rather than a discrete set of skills. Information skills are not isolated activities but rather are connected activities that encompass a way of thinking about and using information (Eisenberg, Lowe & Spitzer, 2004). Information literacy skills models emphasize that the skills are not to be taught in isolation but rather continuously integrated throughout the curriculum. They are most meaningful when taught within an inter-disciplinary unit or within a unit addressing an authentic, real-life need or problems.

The Big 6 set of skills model have been suggested by Eisenberg and Brown (1992) as a systematic framework and a useful tool for solving information problem by students at all levels from elementary school. It is an information process model made up of six major stages and two sub-

stages under each major stage. The six steps in the information process-solving model are as analysed below:

- i. Task Definition
- ii. Information seeking strategies
- iii. Location and access
- iv. Use of information
- v. Synthesis
- vi. Evaluation

The Big 6 set of skills seeks to articulate the entire information seeking life cycle. Fig 1 below diagrammatically illustrates the Big 6 set of skills by Eisenberg and Brown (1992).



Information Skills Process Model by Eisenberg and Brown (1992)

The model presents the information process as a working tool for planning and teaching information problem - solving skills. Students can learn about information literacy skills by using the Big 6-Dig It Internet Web site available on. [Http://home.earthlink.net/~s.russel/bigsixdigit.html](http://home.earthlink.net/~s.russel/bigsixdigit.html).

Also, the media specialist can create an assignment guide using the Big 6 skill model as a framework to teach information skills. The library media specialist and the teachers can work collaboratively to provide opportunities for students to learn information literacy skills from the curriculum content by designing assignments and class works following the six steps in the Big6 skills model.

Rationale for Information Literacy Skills Development by Teachers and Students

The advent of emerging information technologies and the increasing volume of information contained in various formats ranging from print, audio-visuals, and electronic have made the management of documented information a very complex and challenging task. Little wonder that educational restructuring and curriculum reform which provide information skills to access universal information is a requisite for economic and personal development in this information age. In other words, the effort made at educational reform is deeply rooted in the belief that improved schooling will encourage economic growth as the quality of children's education is linked to the success of national economy. Goodwin's (1991) findings reinforce how important it is for students to have information literacy skills to attain success, by concluding that high school students who possess information literacy skills will be more successful in the realm of higher education. Todd (2002) also underscores the importance of integrating information literacy skills into the school's curriculum when he clearly comments that it is an essential key to student success, both today and in the future. Irving (1985) believes that the information retrieval and processing skills acquired and practiced by students through the completion of classroom assignments will transfer to other areas of students' life: academic, professional and personal.

Doyle (1992) is in support of teaching information literacy skills in the curriculum as a process rather than discrete set of skills because it offers ability to access, evaluate, and use information from a variety of sources. In his research, Kuhlthau (1993) found that information literacy skill is a way of learning rather a discrete set of skills. He concluded that by having information literacy skills, students learn to be flexible thinkers and perpetual learners, and thereby preparing them for the new challenges awaiting them in the information age.

Learning to acquire information literacy skills require active learning format in which students can process information to meet specific needs. This inquiry approach is basic to active learning where many resources are available including computer-based and other technologies, forming an information rich environment. According to Eisenberg, Lowe & Spitzer (2004), teachers will need information literacy skills of their own to facilitate They will need to be comfortable with a variety of resources, as well as the process of accessing, evaluating, and using information. In the same vein, the report on Education, Training and Research in the Information Society: A National Survey, published in 1995, states that all teachers need new knowledge, skills, and competencies in order to be able to use information technology as a tool in their teaching work. Teachers of all subjects need to know how to utilize information technology and take account of the requirements of the information society in their work.

Developing Information Literacy Skills by Teachers and Students

The role of the school library media specialist in empowering the teachers and the students in information skills for the information age have been well spelt out in the guideline published by the American Association of School Librarians(AASL), a branch of the American Library Association (ALA) in 1995. In the guideline, it was stated categorically that “Information Power” called for a shift in the role of the library media specialist from a passive ‘keeper of materials’ to a key participant in the learning process. Library media specialists were to be perceived as change agents in the restructuring of the educational process (Eisenberg & Brown, 1988). Specifically stated, their functions include, provision of a variety of resources as the basis for experiential learning, sharing the process by

which students acquire needed information skills with teachers, and encouraging students to pursue individual interests.

First and foremost, information literacy skills should be an integral part of the school curriculum by assigning a conspicuous place to information literacy instruction. The framework for this was established in the National Education Goals where a high premium was placed on the establishment of libraries in the schools. Little wonder that schools with libraries feature time for library-use on their time-tables when the students are taught the basic library use skills. The Nigerian situation is not different from what obtains in the developed countries. For example, the American Library Association Presidential Committee on Information Literacy (1989) agrees that: Producing information literate people will require that schools and colleges appreciate and integrate the concept of information literacy into their learning programs and that they play a leadership role in equipping individuals to take advantage of the opportunities inherent within the Information Society.

The roles of the different stakeholders in the development of information literacy skills are as discussed below:

i. The role of the school library/media centre

A school library media centre containing a wide variety of print and non-print resources has been identified as being critical to the integration of information literacy into the curriculum. The students and the staff can develop the skills as they interact with the resources in an information rich environment where resource-based learning takes place. It should be the hub of a school, where equity of access is ensured.

ii. The role of the school library media specialist.

The media specialist can collaborate with the subject teachers to design courses/programs intended to equip students with essential information literacy skills.

- ❖ The school library media specialist can develop an information skills project using a variety of resources for teachers in their school. This would help teachers create projects that would allow pupils to develop

the information skills necessary to locate, select, organize, and present information in a systematic way.

- ❖ The school library media specialist can create an assignment guide using the Big 6 skills model as a framework to teach information literacy skills. The Big 6 information page on the Internet could be adapted and use for teachers and students. See: <http://www.kindred.k12.nd.us/CyLib/rainf.html>.
- ❖ The media specialist and the teachers can work in teams by selecting topics from curriculum guides and design learning experiences that would incorporate technology and higher order thinking skills.
- ❖ The media specialist and teachers can use the Big 6 skills information process model as a working tool for planning and teaching information problem-solving skills. This model was aimed at developing successful information users.

iii. The role of the class/subject teachers

- ❖ Information literacy skills aspects of the school curriculum should be judiciously implemented by teachers. To help students develop skills, teachers should make their lessons and examinations inquiry in approach. The process approach necessitates selection of various forms of resourced-based learning like problem-based learning , work- based, authentic learning. These styles of learning encourage the use of problem-solving approaches to handle information problems in the world of the future. The process approach requires new forms of student assessment that enables them to demonstrate their skills, assess their own learning, and evaluate the process by which this learning has been achieved. A practical class in the laboratory where students are guided in the process of carrying out experiments from manuals is a good example. Esenberg (2004) opines that educational restructuring makes information literacy skills a necessity as students seek to construct their own knowledge and create their own understanding. Students must be taught how to process information as they apply problem-solving and critical thinking skills to their school and personal lives.

- ❖ The media specialist can design Information literacy instruction program for the subject teachers. Such programs will contain trainings on acquisition of basic computing skills, information retrieval skills, basic searching strategies, use of internet, and the use of library catalogues (traditional/OPAC developing search strategies).
 - ❖ Teachers can instruct students in information skills by using natural environment. The village, historical and cultural sites, friends, leaders and what are readily available in the environment can be used as sources of information. Skills taught include being alert, observation, interpretation, describing observation, making inquiries, appropriate communication techniques, attentive listening, and formulation of questions, taking notes, and presenting information (Jacob, 1995).
- iv. The role of the students
- ❖ Irving (1985) cited in (Eisenberg, Lowe & Spitzer (2004) was one of the first researchers to highlight how important it is for students to have information skills when they complete classroom assignments. Irving noted that such skills are not just important for students when they are completing school works, but are essential skills that can be used for all aspects of life: academic, professional, and personal.
 - ❖ The students can learn information literacy skills through bibliographic instruction which is the teaching of discrete set of information and searching skills within the library setting. As such, educators must provide opportunities for students to learn information skills through the curriculum. This can be facilitated with collaboration of teachers and media specialists.

Conclusion

The readiness of Nigeria to evolve an information society where all its citizens would be information literate, people that know how to find, evaluate, and apply needed information , provides a framework and springboard for discussion on educational reform and restructuring. As students and teachers constitute a significant component of the information society who needs information for personal and economic development, there is the need for them to develop information literacy skills. The

integration of information literacy concept into the learning programme of schools and colleges and provision of human, information and material resources for teaching and learning are requisites for equipping the teachers and students with the information skills basic to their competition in the global economy.

Recommendations

In order to achieve the noble goal of equipping Nigerian schools' teachers and students with information literacy skills, the following recommendations are offered:

- ❖ The school library media centre should be well developed by providing information resources that can support resource-based teaching and learning.
- ❖ Qualified school library media specialists skilled in managing a computerized media centre in an information rich environment should be employed to man the centre.
- ❖ Bibliographic instruction that entails the teaching of library use skills, information technology skills and search strategies should be emphasized in schools.
- ❖ Teachers' training programmes should be restructured to accommodate the teaching of the new evolving information technologies.
- ❖ Opportunities for training and retraining through seminars, conferences and workshops should be provided for teachers and library media specialist to enhance their competencies in information literacy skills.
- ❖ User education in our higher institutions should emphasize information literacy as essential skills for information age.

References

Akinde, T. A. (2006). Towards Implementing the WSIS Agenda in Nigeria. In: A Compendium of Papers Presented at the 44th National Annual Conference and AGM of NLA Abuja, 18-23 June, 2006, 69-76.

- Alexandria Proclamation (2005): A High Level International Colloquium on information Literacy and Lifelong Learning.v <http://www.Infolit.org/2005.html>.
- American Library Association (1989). Presidential Committee on information Literacy. Final Report. Chicago: Author.
- AOL Time Warner Foundation. (2003) 21st Century Literacy: A vital Component in Learning. (Online). Available: <http://aoltimewarnerfoundation.org/>.
- California Academic and Research Libraries Task Force. (1997). Recommended Texts for consideration related to Information Literacy (online). Available: <http://www.carl-acrl.org/Achieves/Documents/achieve/Report/rectoWASC.html>.
- Doyle, C. S. (1994) Information Literacy in Information Society: A Concept for the Age. Syracuse, NY: ERIC Clearing house on Information and Technology.
- Doyle, C. S. (1992) Outcome Measures for Information Literacy within the National Educational goals of 1990. In Final Report to National Forum on Information Literacy. Flagstaff, A. Z: National Forum on Information Literacy.
- Eisenberg, M. B; & Brown, M. K. (1992). Current Themes Regarding Library and information Skills Instruction: Research Supporting and Research Lacking. *School Library Media Quarterly*, 20(2), 103-109.
- Eisenberg, M. B; Lowe, C. A; & Spitzer, K. L. (2004). Information Literacy: Essential Skills for the Information Age. London: Libraries Unlimited.
- Goodin, M. E. (1991). The Transferability of Library Research Skills from High School to College. *School Library Media Quarterly*, 19(1), 33-42.
- Irving, A.1(985). Study and Information Skills across the Curriculum. London: Heinemann Educational Books.
- Jacobs, V. (1995). All Alone and Lost in Cyberspace: Closing the Gap between the Local Village and the Local Village through Teaching Namibian Children Information Skills and Technology. In Sustaining the Vision. Selected Papers from the Annual Conference of the

- International Association of School Librarianship (24th, Worcester England, July 17-21.
- Kuhlthau, C. C. (1993). *Seeking Meaning: A Process Approach to Library and Information Services*. Greenwich, CT: Ablex.
- Shapiro, J. & Hughes's. (1996). Information Literacy as a Liberal Art: Enlightenment Proposal for a New Curriculum. *Education Review*.http://www.educause.edu/pub/er/review_articles/31231.html [articles/31231.html](http://www.educause.edu/pub/er/review_articles/31231.html).
- Todd, R. (2002). School Librarian as Teacher: Learning Outcomes and Evidence-based Practice. In 68th IFLA Council and General Conference (August 18-24). (Online). Available: <http://www.ifla.org/IV/ifla68/papers/084-119e.pdf>.
- University of Arizona Library (1996). Information Literacy Project: Project charge (online). Available: <http://dizzy.library.arizona.edu/infolit/CHARGE.HTM>.
- Work Group on information Competence. 2005. Commission on Learning Resources and Instructional Technology Task 6.1. Information Competence in the CSU: A Report (online). Available: <http://library.csun.edu/susn.curzon/infocmp.html>.
- Zurkowski; P. G. (1974). *The Information Service Environment Relationships and priorities*. Washington D.C: National Commission on Libraries and Information Sciences.