

INFORMATION LITERACY COMPETENCIES FOR SCHOOL LIBRARIANS

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Definition of Information Literacy

Information literacy is a concept which has received increasing emphasis in recent times. According to the ALA (1989).

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 information needed.... Ultimately information literate people are those who have learned how to learn.

This definition closely links information literacy to lifelong and self-directed learning, basic objectives of the National Policy on Education (Nigeria, 1981). The Universal Basic Education Programme (Nigeria, 2000) aims to "lay the foundation for lifelong learning through the inculcation of appropriate learning to learn, self awareness, citizenship and life skills. "This is reminiscent of the statement of Kuhlthau (1995) that "the concept of information literacy encompasses lifelong learning and the application of information age school." We can see then that information literacy is a concept central to Nigerian educational policy and school librarianship worldwide.

Why Information Literacy Competencies for School Librarians?

Lifelong learners should certainly include school librarians, as well as the teachers in a school. If school librarians have a major role to play in information literacy education, then their

need for information literacy competencies for professional as well as personal use becomes obvious. One cannot give what one does not have. One of the observed obstacles to educational reform is the insecurity of some teachers and their consequent reluctance to give up their position of authority in the classroom in favour of an inquiring spirit. So, too school librarians who are not information literate.

What competencies do school librarians need? Basically they need the same competencies as their students, "to recognize when information is needed and have the ability to locate, evaluate and use effectively the information needed" (ALA 1989). While reading for this paper, the authors were panelists for project proposal presentations at undergraduate and masters level. We were struck by the relevance of information literacy education as described in the literature to this higher level research. The same process primary and secondary students were learning in the studies was the process university students were grappling with in their research projects. They too demonstrated a clear need for information literacy education. At the same time, the research process they were undertaking provided excellent opportunities for developing the competencies they would need in assisting users. For instance, the neglect of time spent thinking and conversing about the problem resulted in a lack of focus, as described in the literature (Kuhlthau, 1995, Todd, 1995). The lack of advanced reading skills and neglect of attention to consuming the information led to plagiarism, since the students neither understood what they read nor were able to relate it to their research problem. Let us look more closely, therefore, at the concept of information literacy and its various aspects.

Scope of Information Literacy

Information literacy is a umbrella term. It is first a form of literacy and thus related to other literacies. The term literacy originally meant the ability to read and write, to comprehend and derive information from the written word. As other sources of information gained prominence, this ability to "read" was extended to a whole range of literacies, including visual literacy, media literacy, technological literacy, cultural literacy, computer literacy, among many others, each connoting the ability to derive information from that type of resources. While all these are aspects of information literacy, the original literacy-reading-

remains of crucial importance to the information literate person. According to Wray and Lewis, quoted in Herring (1997), the heart of the information skills process should be seen as "one of transaction, that is the active construction of meaning in negotiation with the text as written." The reading skills that are essential for the information literate person are more than basic or functional literacy. They include advanced reading skills such as reading or gist and making good summaries, being able to distinguish main ideas from details, reading critically (between the lines) and creatively (beyond the lines), among others (Unoh, 1980).

Information literacy also includes what have been called learning skills, that is, skill in accessing and organizing information. Librarians used to refer to these as *user education* or *library skills*, while skills for organizing information (such as note-taking, outlining, summarizing) were termed study skills. Since all involve handling information, they later evolved into information or information-handling skills. This is usually the area that received most emphasis, but a third area has been gaining more attention, as it is seen to be a more essential and difficult area.

This third aspect of information literacy is critical thinking. Moody, quoted in Loertscher and Woolls (1997), has pointed out that "there is a distinct difference...between locating sources of information and locating and interpreting information within sources. The crucial role of thinking in the information process has been emphasized by researchers such as Kuhlthau (1995), McGregor (1995) and Todd (1995). As stated by Quellmatz (quoted in Loertscher and Woolls, 1997), in problem-solving:

Students engage in purposeful, extended lines of thought during which they identify the task or problem type, define and clarify essential elements and terms, judge and connect relevant information, and evaluate the adequacy of information and procedures for drawing conclusions and of solving problems. In the same vein, Reich, quoted in Burdenuk (1997), has stressed the need for symbolic analysis skills for economic success in the knowledge age. These skills include:

abstraction- the capacity to order and make meaning of the massive flow of information, to shape data into workable patterns;

system thinking- the capacity to see the parts in relation to the whole, to see why problems arise;

experimental inquiry- the capacity to set up procedures to test and evaluate alternate ideas;

collaboration- the capacity to engage in active communication and dialogue to get a variety of perspectives and create consensus when necessary.

Critical thinking skills are also acknowledged in National Policy on Education objectives such as "inculcating the spirit of enquiry and creativity", "laying of a sound basis for scientific and reflective thinking", and rais(ing) a generation of people who can think for themselves" (Nigeria, 1981). These objectives, it should be noted, range from the pre-primary to the secondary school levels.

Models For Developing Information Skills

If we accept the need for information literacy and critical thinking, for school librarians first, and then for their students, how can we provide relevant learning opportunities for acquiring these? Over the years many models have been developed for the teaching of information literacy. One of the earliest, widely used in the United Kingdom, is Marland's (1981) steps to research in the form of nine questions:

What do I need to do?	(formulation and analysis of need)
Where could I go?	(identification and appraisal of likely sources)
How do I get the information?	(tracing & locating individual sources)
Which resources shall I use?	(examining, selecting & rejecting resources)
What should I make a record of?	(recording and storing information)
Have I got the information I need?	(interpretation, analysis, synthesis, evaluation)
How should I present it?	(presentation, communication, shape)
What have I achieved?	(evaluation).

The most influential model in North America in the 1990s was Eisenberg and Berkovitz's (1995) Big Six Skills in the problem-solving process:

1. task definition
2. information-seeking strategies

3. location and access
4. use of information
5. synthesis
6. evaluation.

Herring (1997) has four steps in his PLUS model, consisting of:

purpose - Location - Use- Self-evaluation

Yet another model, that of Garland (1995) has the three steps of:

Planning - Process - Evaluation.

A model that focuses on the information search process is that of Kuhlthau (1995) with six steps:

Initiation - Selection - Exploration - Formulation - Collection - Presentation.

A close look will reveal that all these models have certain common features. All of them lay more emphasis on thinking skills than on mechanical skills. This is in contrast to the traditional library skills approach, which stresses location skills.

For instance, all models begin with the basic step of defining the purpose, planning, or identifying the information need. A clear idea of purpose is essential to the successful completion of any task. Learners need to identify what they already know, determine the scope of the problem, produce a coherent plan of action, and think about likely sources of information. All authors stress the importance of thinking about and planning the assignment *before* embarking on the search for information. This is especially true of Kuhlthau's model, which has four steps concerned with thinking about the problem before coming to the fifth step of collecting the information. The third step, exploration, involves drawing on one's own experience, reading and reflecting to form a personal perspective on the problem, exploring for a theme or thread which can serve as the focus for the information-seeking process. The fourth, formulation, is when it all begins to come together: the learner formulates a focus for his search, which then gives her a strategy for selection of information. It is only then that one proceeds to collection of information. This is contrary to the common practice of many of us, who tend to rush to collect information without much forethought, and then push on to the presentation or production stage without digesting the information collected. Even so, reflection on the purpose and plan of the work should continue through all the stages, right up to the end.

Only when the purpose and focus of the task are clear should one proceed to locating and accessing information. Searching requires knowing both where to look and how to look for information. This is the step formerly emphasized in library instruction, understanding the organization of knowledge and the use of indexes and catalogues. But Herring (1997) has pointed out that the problem students have is not so much finding information and ideas in resources as finding relevant information and ideas. To do this, as was pointed out above, requires a clear sense of the purpose, scope and structure of the task and the ability to analyse information for relevance to that task, that is, thinking skills. Even when information has been located, there is need to take time consuming it (Loertscher and Wools, 1997) The time taken consuming the information is crucial to understanding what is read and relating it to existing knowledge.

Evaluation is another crucial aspect of information analysis and another critical thinking skill, one that appears regularly in the models above. The necessity for evaluative skills has been increased by the mass of information (and misinformation) now available. The quality of information on the internet, for example, has become a matter for concern (Clausen, 1997, Fitzgerald, 1997) as this source has become more widespread and popular. In a medium where anybody can publish anything, instantly and with complete anonymity, with no central authority or editorial control, misinformation is likely to abound. At the same time, users have great confidence in the internet, they assume that the information they need will be there (and that they will be able to find it), and take the quality of the information for granted. But the need to evaluate information is not unique to the Web. Certainly we have all come across misinformation from print materials (books, pamphlets, advertising materials, political propaganda, even, I regret to say, primary school textbooks), as well as the mass media and spoken communication.

Evaluation can be aided by focusing on questions such as those posed by the Coalition of Essential Schools (Loertscher and Woolls, 1997).

How do you know that you know? What is the evidence? Is it credible? What viewpoint are you hearing, seeing, reading? Who is the author? Where is he/she standing? What are his/her

intentions? How are things connected to each other? How does "it" fit in?

Where have you heard or seen this before?
What if.....? Supposing that.....? Can you imagine alternatives?

Most models end with the process of self-evaluation. It is valuable for student to look back on the process and reflect on what they have done. This will help them refine their strategies and better understand the research process for another time.

Another vital aspect of information literacy is the communication or presentation of what has been learned. Students also gain skills in presenting *information to others*, whether it is to their classmates, teachers, or people outside school. Suggestions for specific steps can be found in many sources, such as the articles referred to in this paper and Dike (1993), among others.

We will now consider collaboration with others in implementing information literacy education, once the school librarians have gained the necessary competencies.

Information Literacy: The Responsibility of All

Information literacy is the responsibility of all. School librarians cannot do it alone. They need to work in collaboration with other relevant persons and agencies who can help with the inculcation of information literacy in school children. These include the teachers, professional educators, and agencies such as international organizations, museum and archives, and community-based organizations.

Collaboration with Classroom Teachers.

This is an imperative in the process of inculcating information literacy skills in school children. The school curriculum has to be planned together by the school librarians and classroom teachers so that class projects can be successfully conducted using the resources of the school library. The school librarians can also help in enriching children's information literacy skills during library lessons which inculcate information skills, critical thinking and independent learning approach. Finally, this collaboration will ensure that the objectives of the

school curriculum as enshrined in the National Policy on Education are realized through the meaningful use of the school library resources.

Collaboration with Library and Teacher Educators.

Professional library and teacher training empowers its products in teaching the skills implied in information literacy to become an integral part of the school curriculum. School librarians, and also the classroom teachers, need to be information literate if children are to be information literate. Therefore, neither school librarian nor teachers can hope to teach information literacy in a vacuum; they must be partners and take active role in relating library assignments to the instructional concept of the curriculum. This presupposes that both school librarians and teachers should be well versed in research skills, and these, therefore, need to be an intergral part of the library school and teacher-training programme

O'Hanlon (1987) had identified types of research skills needed by trainee-teachers and librarians as the following:

- i) Ability to conceptualize research problems clearly and determine questions to be answered.
- ii) Ability to use reference sources such as encyclopaedias, indexes, dictionaries, etc.
- iii) Ability to devise and carry out an organized plan (i.e. search strategy) to find relevant information on a topic.
- iv) Ability to synthesize information gathered from many sources.
- v) Familiarity with magazines and other serials
- vi) Ability to evaluate quality and authority.

Olen (1994) insists that teachers ought to be role models for their pupils/students with regard to reading and information literacy development and to do this they must become information literate in their initial teacher education. Unfortunately, the provision of facilities, equipment and staff in the universities and colleges of education are generally poor and therefore do not often produce information literate teachers. Competencies required by teachers are to become "*competent, confident, resilient, self-reactive and develop a range of pedagogical skills*

and classroom management skills, and an appreciation of the central roles of enquiry in both teaching and learning". (Olen, 1994).

Library educators and teacher trainers should promote reading and information literacy in the teaching and learning process and at the end assess their students' information literacy as part of their certification. In all, professional training programmes must inculcate in the librarian or teacher every aspect of information literacy to enable him/her play his part successfully in teaching children.

Collaboration with Outside Agencies.

International organizations such as UNESCO, World Bank, and professional associations such as IFLA, IRA, IASL, IBBY, etc. need to take bold steps to do more for the development of information literacy through building up school libraries. These organizations can help by equipping school libraries with relevant learning resources and information technologies to enable them play the roles of facilitators in the information age (Amucheazi, 1998).

They can also sponsor or host workshops for school librarians and teachers to help them develop the necessary information literacy competencies. For example, the UBE/World Bank project on classroom libraries not only furnished the collection, but also includes workshop training in the use of library materials, including ways teachers can inculcate information literacy through their use.

Finally, they can develop useful materials on information literacy education and its integration with the curriculum through the publication of relevant texts and research articles.

Museums and Archives as cultural and educational agencies play important roles in inculcating information literacy in school children. Every museum should be a centre of not only popular instruction but of scientific information (Fuch, 1997). The art museum, for instance, is especially relevant in teaching visual literacy to school children as their resources such as paintings and art works from a variety of cultural background

help children to master art appreciation and techniques of line, colour, shape, etc. (Fuch, 1997). School art teachers often collaborate with museum artists and classroom teachers in achieving this objective. The museum usually has an ample specialized library which should be free to all, comfortable and open during leisure hours.

In the United Kingdom, for example, class visits to museums are now mandatory in the school curriculum. During such visits, the librarian serves as both guide and adviser in highlighting objects and their relevance to school subjects like history and social studies.

Archives are institutions with a cultural mission and should no longer be used exclusively for scholarly research and public administration (Behr, 1974). There is now more than ever the possibility of making the historical sources kept in archives available to schools. As children are brought into contact with original sources, it would be in their interest as a more modern approach to the teaching of history and social studies is adopted by the classroom teacher. This is also a useful way of developing information literacy through class projects.

During such visits to museums and archives, children would also discover things related to their school subjects and ask useful questions as well as evaluate their curriculum as they are carefully guided by their teachers and school librarians.

Exhibitions in museums and archives also have a role to play in information literacy. Experience has shown that communities are prepared to contribute collectively to support and sustain schools for their children. Community-based groups, which can assist in funding education, including libraries, include the following: town/village development unions, religious groups, age grades, alumni associations, board of governors/PTAs of schools, prominent citizens' clubs and social clubs, etc. (Amucheazi, 2001).

In addition to funding, the community can provide many resources for developing information literacy competencies. The oral indigenous knowledge system contains valuable social, scientific and technological information. This information can be

harnessed through information capture in the relevant indigenous languages using audio technology supplemented with real albums or charts containing aspects of a people's material culture. The resources resulting from this can be a veritable means of enriching the school curriculum based on pupils/students' background. In this way the local communities are also making an input into the curriculum as information custodians/providers.

In order to utilize these rich resources, both in building up the school library collection and in inculcating information literacy in the pupils/students, school librarians need the information literacy competencies outlined earlier in this paper. This will enable them to guide the collection of such materials while also utilizing community resources for information literacy education.

These examples of collaboration of various outside agencies in ensuring the inculcation of information literacy in school children have clearly authenticated the view that education for all is the responsibility of all. As at September (1993) posits without the support of these people, our understanding of the need for literacy and information literacy may possibly be limited to reports, surveys, and scholarly discourse on the topic.

Conclusion

As library educators, education policy makers, school librarians and teacher librarians, we need to become information literate ourselves, and then investigate ways of helping our pupils/students develop information literacy. We should also explore and exploit the learning opportunities and assistance offered by other relevant persons and agencies in developing information literacy education. In this way, as information literacy becomes a responsibility shared by all, we will be able to create an information literate society through school libraries.

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