Role of the Library in the Promotion and Sustenance of Various Levels of Environmental Literacy: Focus on Nigeria

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Abstract

The purpose of this paper is to x-ray the conventional and emerging responsibilities of the library in the promotion and sustenance of the three levels of Environmental Literacy and make appropriate recommendations. The provision of relevant print and non-print materials, multimedia resources and the creation of reading/reference sections/space for beneficiaries at the respective environmental literacy education levels are highlighted among the essential roles the library must perform. In this regard, Nigeria's provision in her National Policy on Education for the establishment of *Virtual/Digital* libraries alongside the conventional libraries is considered a commendable and positive move worthy of emulation for effective promotion and sustenance of environmental literacy education. In view of the enormity of financial resources required to set up effective and efficient libraries, the creation of a special vote-head in government annual budgets as a major source of the required funds is one of the recommendations made in this paper.

Keywords: Conventional Library, Virtual/Digital Library, Environmental Literacy Levels.

1. Introduction

1.1 The library at a glance

A library is a collection of books, periodicals, films, recordings, computer data bases, or other media. Libraries form a vital part of the world's systems of communication and education. They make available knowledge that has been accumulated through the ages. People in all works of life, including students, teachers, scholars, scientists, business executives, and government officials use library resources to enhance their productivity. Large numbers of people also turn to libraries to satisfy a desire for knowledge or to obtain materials for some kind of leisure-time activity. In addition, many people enjoy book discussions, concerts, film programmes, lectures, story hours, and a variety of other holdings of libraries

1.2 The traditional role of a library

Libraries play an important role in preserving a society's cultural heritage. For example, some libraries have social collections of rare books, authors' original manuscripts and works of local artists. In addition, many libraries develop exhibits and offer programmes on libraries to help people learn about the historical antecedents of their communities or about the cultures of other civilizations. All in all, the library ranks as one of society's most useful service institutions.

2. Nigeria's National Policy on Education Provision for the Establishment of Conventional and Virtual/Digital Libraries in the Country

Section II of Nigeria's National Policy on Education (FRN, 2004: 51) makes provision for the establishment of Educational services which, according to the Policy, would "facilitate the implementation of educational policy, the attainment of policy goals and the promotion of effectiveness of the educational system". In this regard, the Library is seen by the Policy as being at the heart of the educational enterprise. Accordingly, the Policy sees the establishment of a *Virtual Library* as a platform for sharing knowledge and for rejuvenating Nigerian schools through the provision of current books, journals and other information resources using digital technology. The objectives of the National Virtual Library are as follows (FRN, 2004:52):

i) improvement of the quality of teaching and research at all levels of education in Nigeria through the provision of current books, journals and other library services;

ii) enhancement of access to academic libraries serving the education community in Nigeria to global library and information resources;

ii)   enhancement of scholarship, research and life long learning through establishment of permanent access to shared digital archival collections.

To achieve the above objectives, government undertook to provide appropriate Information and Communication Technology (ICT) facilities to ensure that the benefits of the Virtual Library system permeate all levels of education in Nigeria. In this regard, the Federal Government stipulates that (FRN, 2004: 53):

i)   Since libraries constitute one of the most important educational services, proprietors of schools shall also provide functional libraries in all their educational institutions in accordance with the established standards. They shall also provide for training of librarians and library assistants for this service.

ii)   State and local governments shall establish public libraries and actively promote general readership.

It must be mentioned at this point that establishment of Virtual Libraries is currently made a requirement for accreditation of private secondary schools as well as public tertiary institutions (especially the universities) in Nigeria. Again, public libraries established by government have also for a long time been directed to create Virtual/Digital Library sections.

3. Images of Environmental Literacy

The creation of an environmentally literate citizenry has been aptly described elsewhere by this author as the bottom-line goal of environmental education (Eheazu, 2013). This goal does not mean, however, the same thing to everyone. Although the term environmental literacy has been used for more than two decades, it continues to lack precise definition. It has received a good deal of attention since 1968 and creates positive images while covering little in the way of substantive
information or direction. Renewed interest in environmental education affords an opportunity to reconsider and highlight the inter-relationships between environmental education and environmental literacy and to define the latter so it can be a useful term and concept.

The 1970 American National Environmental Education Act brought environmental education back to the attention of many educators and environmentalists (Marcinkowski, 1990). Nonetheless, how much impact this has had on educational decision makers still remains to be comprehensively documented. At present, as in the past, educational leaders show little direct interest in education about the environment, except as it may be subsumed under traditionally defined curricula areas.

Even the 1970 American Environmental Education Act, referred to above, received essentially no priority consideration from the United States (US) Department of Health, Education and Welfare, where it was housed. However, over the years, significantly greater interests have been demonstrated by conservationists and environmentalists. Environmental quality has been the priority of these groups and thus they see environmental education as a mechanism for promoting it. For this reason, the 1970 American Act began to receive significant attention from its host unit, the United States Environmental Protection Agency and from conservationists and environmentalists alike. Arising from this development was the promotion of Environmental Literacy for citizenship education for both adults and school-age individuals to function effectively as environmentally-friendly people in today's and tomorrow's society (US Dept. of Education, 1991).

4. The Genesis, Scope and Importance of Environmental Literacy Education.

4.1 The Roots of environmental literacy

In its earliest application, the term literacy was used to refer solely to the ability to read and write. In point of fact, the term *illiterate* predated its positive alternative, *literate*. As described by Michaels and O'Connor (1990), literacy is an inherently plural notion. The world today has many different literacies, including mathematical literacy, computer literacy, and so on. Each of these literacies is an integration of ways of thinking, talking, interacting, and valuing in addition to reading and writing. Literacy then is less about reading and writing per se, but rather more about ways of been in the world and of making meaning out of written text and technological processes. Although environmental literacy is not

identified by direct reference to it in most discussions of educational goals, it may be inferred from considerations of specific literacies such as those identified by the US Dept of Education (1991) in its publication titled *America 2000*. In any event, Roth (1992) has traced the roots, evolution, present status and future prospects of environmental literacy.

Most literacies are defined in cognitive terms. Knowledge is a necessary pre-condition of thoughtful behavior and action. Educational systems usually limit their operational objectives to the attainment of knowledge and skills related to their effective and efficient acquisition; they do not actively promote the pro-active development of responsible environmental behavior, as has been noted by Hungerford (1987). Individual and societal environmental behavior, however, belies the assumption that behavioural change follows directly from development of necessary knowledge and skills (Lozzi, 1989).

Since the term was coined, a distinguishing characteristic of environmental literacy has been its "action" perspective as contained in the following excerpt (Roth, 1992: 85):

Environmental literacy is essentially the capacity to perceive

and interpret the relative health of environmental systems

and take appropriate action to maintain,

restore, or improve the health of those systems ….

Environmental literacy should be defined … in terms of

observable behaviors. That is, people should be able to

demonstrate in some observable form what they have learned,

their knowledge of key concepts, skills acquired, disposition

towards issues, and the like.

This action perspective obviously underscores the importance of environmental literacy education.

4.2 Levels of environmental literacy (EL)

Levels of literacy are generally assumed to exist but are not often defined. With regard to environmental literacy, Roth (1992) has identified three levels of EL which are summarized as follows:

i) *Nominal* **level** (ELL_1), indicating ability to recognize many of the basic terms used in Communicating about the environment and to provide rough, unsophisticated, working definitions of their meanings;

ii) *Functional* **level** (ELL_2), marked by a broader knowledge and understanding of the nature and interactions between human social systems and other natural systems;

iii) *Operational* **level** (ELL_3), depicting progress beyond functional literacy in both the breadth and depth of understanding and skills.

These levels could be seen as respectively corresponding to basic environmental literacy, post environmental literacy, and advance (tertiary level) environmental literacy

4.3 Content of environmental literacy education

More simply put, environmental literacy derives its focus from four basic issues that take it well beyond the typical boundaries of science education, or any of the traditional disciplines; namely,

i)   The interrelationships between natural and social systems;

ii)   The Unity of human kind with nature;

iii) Technology, and

iv) The making of choice in developmental learning throughout the human life cycle.

Thus, environmental literacy draws upon six major areas - environmental sensitivity, knowledge, skills, attitudes and values, personal investment and responsibility, and active involvement. In Roth's (1992) description of the specifics of EL, environmental sensitivity and attitudes and values are subsumed under the term "affects", while personal investment and responsibility and active involvement are subsumed under the term "behavior". This creates four strands - knowledge, skills, affect, and behavior to be addressed in the propagation of environmental literacy.

5. Role of the Library

From the foregoing discussion on the topic of this paper, it would be pertinent to say that the library has a critical role to play in fostering different levels of environmental literacy. This role can be seen in the various

facets of the services usually associated with libraries as listed below:

i) Provision of access to Information:

Libraries strive to keep their collections and services open to all members of the Community regardless of age, citizenship, occupation, economic status, educational level, ethnicity or background.

ii) Procuring/maintenance of Collections:

Libraries maintain collections that can span the spectrum of human knowledge and opinions. Collections include printed materials such as references sets, paperback novels, biographies, children's and young adult literature, histories, newspapers, and magazines.

iii) Provision of lending materials:

As part of their mission to provide information resources to the Community, Libraries allow users to borrow items form collections for limited lengths of time. To be eligible to borrow library materials, a user must register her or his name, address and other basic information with library circulation department, which keeps track of the library's collections.

iv) Offering of services to Community:

Libraries offer an increasing variety of services to neighbouring communities. Common services usually offered range from story hours, crafts, and puppet shows for children to computer technology workshops, concerts and lecture service for users of all ages. Libraries employ Professional reference librarians who assist users in finding information. Reference librarians are specially trained in research techniques that allow them to fish out quickly library resources needed by users

v) Provision of special services to children and young adults:

Before the early 1900s, children under ten years of age were denied full borrowing privileges at libraries. Today librarians consider service to young adults a primary mission, where children's librarians and guest story   tellers read stories to the youth/children to encourage a love for books and reading.

6. Resource Requirements for Effective Library Services for
   Various Levels Environmental Literacy

 Mann (1939) was of the view that students, if limited to textbooks, would contract a habit of being contented with ignorance. In order words, so long as teaching and learning are restricted to the information contained between the two covers of the textbook, and the four walls of the classroom, the library will remain a "study hall book dispersal centre" R. A. Davies (1979) and I. K. Davies (1981) consider an ideal library as an organized collection of all instructional materials (visual and audio); which also uses the services of trained teacher/librarians conversant with the art of acquiring, organizing and circulating these materials.

For the promotion and sustenance of various levels of environmental literacy, as defined above, the library needs to provide appropriate print and non print materials. The various print materials are in the form of books, monographs, and serials; whereas the non print materials include audio and visual materials, usually referred to as multi media resources. For the purpose of identifying the library resources needed for each level of environmental literacy, it would be necessary to briefly discuss the resources in relation to their specific attributes as follows:

i) *Books and Monographs*
For the basic or neoliterate level of environmental literacy (ELL_1), the library is supposed to provide primers that would emphasize, among other things, adult roles in the conservation and maintenance of the environment. Additionally, magazines that focus on local aspects of waste management and disposal with appropriate illustrations would be of immense use in the sustenance of the skills of reading and writing. Furthermore, monographs that focus on local economy and marketing processes would also help in the promotion and sustenance of the skills of numeracy and writing.

For the post literacy level (ELL_2), books that libraries need to provide would include textbooks on various subject areas that may be of interest to post literacy learners in their quest for General Education Certificate, like the WAEC or the GCE. For further generation of interest in reading generally for leisure and development of intellect, the library at this level, would need to provide materials on environmental education beyond the basic literacy level. Such materials or resources would include those that discuss current issues of the environment that are found to be of interest to this group of learners. The materials could come
in form of magazines, novels or chapters in related subject areas like social Studies, Geography, Physics and so on.

For the tertiary level (ELL_3), the library should provide for various students polytechnics, colleges of education and the universities, stocks of student projects dealing with environmental issues. Allowances should also be made by the libraries for the procurement of technical reports on current environmental issues like global warming, depletion of the ozone layer, deforestation and their climatic implications.

ii) *Audio and Visual/Audiovisual Materials*

At every level, (basic literacy (ELL_1), post literacy (ELL_2), and tertiary (ELL_3)), audio and visual environmental materials which would enhance the appreciation of what is learnt from the print material (books, monographs and so on) should be made available by the library for the sustenance of environmental literacy. Visual materials could come in the form of pictures or charts strategically displayed for quick sighting. The pictures could also be part of the books and monographs already discussed above.

In general, a library should create sections that would house and exhibit its provisions for the respective levels of environmental literacy. Another important role towards the promotion and sustenance of various
levels of environmental literacy is to ensure that the provisions discussed above are made known to learners at the respective levels of environmental literacy. This could be done by circulating information on the stocks of environmental materials held in the libraries to adult basic literacy centres, post literacy centres and the tertiary institutions.

7. School Library Funding:

Obi (1977) recommends an initial special grant or allocation

to get the library stock started. A librarian who can persuade his authorities to make such a grant will then be in a position to start with adequate basic resources. Such basic resources may include books and non book materials as well as experienced pioneer staff.

8. Library Personnel:

A specialist in the Care and Management of library resources, including personnel, must carefully be selected to skillfully handle all facets of the environmental literacy programme. Furthermore, some special provisions would have to be made along the lines of Nigeria's Federal Government's Virtual Library establishment highlighted earlier in this paper. Accordingly, Federal, State and Local Governments (and even communities) should be involved in the provision of special library
materials and personnel for the promotion and sustenance of various levels of environmental literacy.

9. Summary and Conclusion

From the foregoing expositions relating to the topic of this paper, the role of the library in the promotion and sustenance of various levels of environmental literacy should rightly be considered as critical. The provision of relevant print and non print materials, circulation of information on what is stocked and creation of reading/reference sections/spaces for the respective levels of environmental literates, are among the roles the library must perform in the effort to promote and sustain the various levels of environmental literacy.
In the particular case of Nigeria, the country's educational policy provision for establishment of virtual/digital libraries could be acknowledged as a commendable step which should be emulated for effective operation of environment literacy education.

10. Recommendations

In the light of the above discussed critical role of the library, and to ensure that this role is effectively and efficiently performed to enhance promotion

and sustenance of environmental literacy, the following recommendations are considered pertinent:

i)   Libraries should be encouraged to make the various provisions (including the establishment of digital sections) which have been proven necessary in this paper for promotion and sustenance of the three levels of environmental literacy education;

iii) To ensure the existence of a reliable and consistent source of funding the enormous financial resources required to properly equip the libraries for their role in environmental literacy education, governments at various levels should each create a relevant vote head in their annual budgets for the said purpose;

iv) The libraries, through their managements, should also source additional assistance, in cash and/or kind, from benevolent individuals and corporations to enhance their capacity to promote and sustain environmental literacy

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