Developing Public Library Services for the Virtually Impaired in Delta State: Adaptive Technology to the Rescue

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Abstract
The paper examined the need to develop public libraries services for virtually impaired persons in Delta state. The relevance of adaptive technology in public libraries for these categories of persons cannot be underestimated. Library and information services available to the visually impaired people through adaptive technology were discussed. Adaptive technology as a tool for enhancing public library services and the rationale for its use were also discussed. The researchers also highlighted the constraints facing public libraries in the use of these technologies in Delta state and Nigeria in general. Recognizing the potentials of adaptive technology, the paper concluded by pointing to the fact that what is needed is to ensure an all inclusive services to all irrespective of visibility. ICT and its related technologies in public library services should be embraced in all the branches of public libraries in Delta state. Library policy statement should be translated to reality, hence the library board should be well funded and given power to monitor the development of branch libraries.
Key words: Developing, Public Library, Library Services, Virtually Impaired, Adaptive Technology and Rescue

Introduction

The Delta State Library Board was established by the Bendel State Library Law (Edict No. 4 of 1971, No. 3 of 1976) now applicable to Delta State, to provide library services to the people of Delta State through books, journals, periodicals as well as non-book materials. Therefore the role of public library in education and national development cannot be underestimated. Public libraries are agencies of information generation and dissemination to all within a society for self-development, as well as national development. They are expected to play an indispensable role in the life of the community they serve, one of which is the promotion of reading culture among members of the society irrespective of disability, be it in the rural or urban settings. Access to information resources and services within the larger society cannot be achieved without involving public libraries because they "are one of the building blocks of the local information and knowledge infrastructure" (Tiso, 2000).

Despite the type and where a library is situated, its role remain the same; to select information resources in both print and electronic formats, acquire, organize, disseminate the resources to the immediate users and beyond and to educate the users on how to use the resources. UNESCO in 1952 held a seminar on public library development in Ibadan with the following aims and objectives:

i)   To support and reinforce programme of adult and fundamental education,
ii) To provide effective service for children and young people including requisite services for school
iii) To promote and stimulate reading for pleasure and recreation, and
iv) To provide, wherever needed, adequate service for special groups in order to   ensure availability of resource on equal terms to all members of the community (Akinola, Apotiade, Ogunmodede, and Oyetola, 2013).

A cursory glance at these aims and objectives as against what is on ground in Delta State public libraries shows that items one to three are basically common, while there is a near complete absence of the fourth item. There is therefore a big knowledge/ service gap that need to be bridged. It is a truism that virtually impaired people exist in every community in the world and Delta State is not an exception. The guidelines for   development of the public library collections should be based on the principle of access for all and include access to formats appropriate to specific client groups, for example braille and talking books for blind people (IFLA, 2001).

The ideal library services is one where each individual, regardless of the degree of virtual impairment, has access to the materials and information at the time they are required, in a format that can be used, in the qualities that are needed, and where the needs of the users are understood by the staff (Machell, 1996). Inspite of all these, virtually impaired woman, men, children continue to be discriminated against by the society and generally ignored by mainstream services and development programmes. This pervasive state of mental subordination among these categories of people generated a syndrome of self-relegation or self-rejection and will

continue for as long as the so-doomed public library services prefers to conveniently ignore virtually impaired in our society.

There are evidences that virtually impaired persons are disadvantaged as far as access to public library services, educational and employment opportunities are concerned. Rowland (2008) noted that of all the countries in Africa, only South Africa has a well-developed functional library for the virtually impaired despite the fact that there are nearly 7 million blind people on the continent. The unprecedented number of virtually impaired population of almost all developing countries continues to grow. Beside this, the new world order is driven by knowledge and exchange of information and ideals, surviving in today's information age therefore depends on access to national and global information technology networks (Ejedafiru & Isebe, 2011). For instance, Lichterman (2011) upholds that the internet has radically altered the way people interact with information and redefined the library's place in academia and society. Halder (2009) opined that with the development and application of ICTs, the library environment has shifted from the traditional library to hybrid library; from there to automated library and then digital and virtual library. Presently, it has shifted to library 2.0. Therefore, public libraries in Delta state should not isolate themselves from these technologies of mind formation and societal advancement, because they are opening new doors for people irrespective of disability to have enhanced access to information.

Modern libraries are taking advantage of advances in ICTs to increase information access to all including virtually impaired. Series of ICT devices called adaptive or assistive technologies are now available to provide access to information in electronic databases and on the internet, giving blind users equal opportunity as the sighted. In this paper adaptive technology is a device and software designed to make library materials and services more accessible to people with physical and/or cognitive disabilities, including large print books, closed captioned video recordings, Braille signage, voice amplification devices, screen magnification and screen reading software, voice recognition software etc. Therefore, questions that come to mind are: what is the level of library and information service provision to the virtually impaired in Delta State? How can information provision to these categories of people be improved? What roles do public libraries play to ensure an inclusive library and information services to the virtually impaired in Delta State? These questions will be addressed in this present study.

Library and information services available to the visually impaired

The issue about the library as a haven for learning, teaching and research is actually an extended debate, but this argument has met responses from information professionals who argued in the light of the transformation position of the library in this era (Omeluzo, Bamidele, Ukangwa & Amadi, 2013). Since virtually impaired people cannot read the conventional print, they have the right to read information in format that are accessible to them, just like the sighted, the virtually impaired can use many of the ICT facilities independently if necessary accessibility devices are put in place.

Modern libraries are taking advantage of advances in adaptive technology to increase information access to all including virtually impaired. Adaptive or assistive technologies are now available to provide access to information in electronic databases and on the internet, giving blind users equal opportunity as the sighted. These include:

i.   Screen magnifier: This is a software that allow text or graphics on
     Computers to be magnify up to sixteen times the original.
ii   Screen reader: A software that reads out the content of a document
     to readers.
iii Voice recognition software: this allows the users to input data into the
     computer by voice(Babalola & Haliso, 2011).

It is pertinent to observe that if these technologies are made available in public libraries, the abilities of the virtually impaired people to make effective use of them will not be in doubt. For instance a virtually impaired library user can input voice messages into the computer through voice recognition software and thereby participating in information storing and retrieval processes. In line with the objective of providing information to its special users group irrespective of the format, public libraries in Delta State should embrace these technologies. The likely question that comes to mind is: what is the state of adaptive technology readiness in Delta State public libraries? It is evident that library and information services to virtually impair in Delta state and Nigeria in general are almost non-existent. This is tied to the underfunding of public libraries in Nigeria. Okiy (2005) reinstated this fact by stating that the general poor attitude of the Nigerian government towards development of libraries has adversely affected the development of public libraries services in Nigerian.

Adaptive technology as tool for enhancing public library services to the Virtually Impaired

The World Health Organization (WHO) statistics, states that there are about 314 million visually impaired people globally with 45 million totally blind. 87% of the virtually impaired live in developing countries and women and people above 50 years of age at higher risk (WHO,2009). Friend (2009) asserted that less than 5% of the information materials available to sighted library users are accessible to the virtually impaired. Accessibility to information materials in public libraries are essential if the goal of fostering functional independence is to be achieved in people with virtual impairment. ICT ensures that advanced technologies in libraries provide many alternatives in their drive to fulfill their information needs accordingly. Hassan-Raza 2010 In: Ejedafiru and Isebe (2011) opined that the internet and other electronic equipment makes it possible for virtually impaired and blind people to use some Electronic Information System (EIS) as do normal people.

Besides, adaptive technology has become the more widely used term for the broad range of supports available to assist people with various cognitive, sensory, physical, communication, learning, and other challenges that limit participation and learning opportunities. Cook and Hussey (2002) defined assistive technology as a broad range of devices, services, strategies and practices that are conceived and applied to ameliorate the problems faced by individual who have disabilities. Assistive technologies are aimed at maximizing the visual environment and increasing the independence at home and in the community for individuals with blindness and low vision.

The Royal National Institute for the Blind (RNIB) (2006) described persons with visual impairment as people with irretrievable loss of sight. These include persons with partial sightedness, low vision and total blindness. American Library Association (2007) recognizes the critical need for access to library and information resources, services and technologies by all people, especially those who may experience language or illiteracy related barriers, economic distress, cultural or social isolation, physical or attitudinal barriers.

Recognizing the potential that 21st century public libraries offer for competitiveness and the effectiveness of societies, Government and all stakeholders across the globe are striving to provide online products and services to all user groups. Despites all these efforts in developed countries, public library and virtually impaired people in Delta State are not using online products and services which have led to a digital divide. It remains a big task for public libraries in Delta State to create enabling environment for these categories of disadvantaged people to have access to library services. From all indications, public libraries have not been given maximum and increasing attention and this may be owing to the fact that library is not a profit making organization forgetting that it is the store house of knowledge and sophisticated information.

Rationale for the use of Adaptive Technology in Public libraries

Advances in technology provided new options for public libraries and individuals with virtual impairment to participate in and accomplish tasks. If public libraries are to survive the present global competitiveness and be able to make an indelible impact on their clientele irrespective of visibility, their services must have good understanding of the indispensable need for adaptive technology. It is therefore paramount for public libraries in Delta State to deploy enabling technologies that allows all categories of persons to reach their potentials. Assistive technology helps many individuals to access information, connect with others, and participate in ways that would not be possible without the use of assistive technology (AT).

A major significant challenge in public library accessibility is to make software usable by people with visual impairment, since computer interface often solicit input visually and provide visual feedback in response. For individuals with mild to medium vision impairment, Ali (2008) suggested the use of large fonts, high DPI displays, high contrast themes and icons supplemented with auditory feedback and screen magnifying software. In the case of severe vision impairment such as blindness, screen reader software that provides feedback via text to speech or a refreshable Braille display is necessary accommodation for interaction with a computer (Ali, 2008).

It is important to observe that greater access to relevant channels through which the virtually impaired can express their opinions would promote their participation in decision making on issues affecting their lives in particular and the society in general. If the virtually impaired are to play their expected role as key participants in sustainable social-economic development and democratic culture, they must be mobilized and empowered to use adaptive technologies in our libraries.

Bearing in mind that everybody irrespective of visibility or disability in general need the skills and opportunities to participate in our increasingly information-focused society and economy, Popoola (2009) and Okilagwe (2009) posited that information is a critical economic resource which is capable of improving the knowledge state of the individual to take rational decisions. Information is no doubt, an integral part of man's daily activities and existence irrespective of visibility. Information is used to mean man's accumulated knowledge in all subjects, in all forms and from all sources that could help its users to make rational decisions

(Ifidon, 2006). Besides, it is the role of the public library to create an enabling environment for people, irrespective of visibility to access information.

Strategically, public libraries should ensure that branch libraries are encourage to support equitable access to information for virtually impaired users by capitalizing on adaptive technology. There is the need to build consortium among all public libraries, education system, the private sector and all levels of government to improve library services to virtually impaired people since no single library can do it alone. Seeking more grants and other alternative sources of funding to upgrade or establish adaptive technology should also be part of strategies to promote library services to these classes of library users.

Constraints to the use of adaptive technology in public libraries

The Delta state public library is the major stakeholder in education and information dissemination to all irrespective of visibility. Therefore, it is the duty of the public libraries to transform our society from "Social Exclusion" to an all-inclusive society that will guarantee level playing ground regardless of age or disabilities. Studies have shown that adaptive technology are helping virtually impaired to learn and interact, but there are some barriers that comes on the way of the virtual impaired to get advantages of these wonderful technologies. Prominent among the barriers are inadequate funding of public libraries, lack of awareness about available technology, lack of sufficient and accurate data on virtually impaired, poor service infrastructure for persons with virtual impairment and failure of the public libraries to embrace ICT and related technologies in their routine services. In their study, Ejedafiru and Isebe (2013) observed that public libraries should not just be superficially be open to all, they should really address all primary needs that can be linked to information needs and access to information. The inabilities of public libraries to provide services to virtually impaired persons are not inherently caused by the impairment of given individuals, such as the inability to see. Rather, it is observed that there are social problems; public libraries have failed to remove barriers to virtually impaired people even though the means exist to do so.

Conclusion

Public libraries are effective instrument, for social change and the existing values influence the philosophy, objective and pattern of education in any society. To the realization of desirable individual and national values, quality technology provision to public library services is the answer.

Recommendations

- Government should ensure that public library policy statements are translated to reality, policies should address the needs of these categories of people. Delta state library board should monitor the implementation of such policies and the development of branch libraries.
- Universal design for public libraries should be developed by Delta state library board. Universal design is the shaping of product and environments in such a way that they can be used by everybody as widely as possible and without the needs for further adaptation or individual design.
- Infrastructural facilities for adaptive technology should be put in place and the right environment should be created, because the abilities of these virtually impaired persons to creatively deploy these technologies are not in doubt.

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