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**INFORMATION AND COMMUNICATION TECHNOLOGY AND THE PHYSICALLY  
CHALLENGED: AN ADVOCACY FOR AN INCLUSIVE INFORMATION SOCIETY IN  
NIGERIAN LIBRARIES**

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**ABSTRACT**

*This article discusses the state of the physically challenged in our society. It describes the nature and characteristics of the term 'physically challenged'. The article emphasizes the role of libraries and information professionals in bridging the gap between the physically challenged and their normal counterparts in the 21<sup>st</sup> century. It further highlights the various assistive devices that can be provided by libraries to meet the special information needs of the physically challenged. The paper advocates training of librarians in ICT and special education to acquire relevant skills to serve the physically challenged and adequate funding to acquire, maintain and sustain technology.*

**Keywords:** *Physically challenged, Assistive devices, ICT, Assistive technologies, Disabilities, Impairment*

**Introduction**

In teaching and learning, in research, management, industry, information management, libraries and information services, national economy, international affairs, to mention but a few, information and communication technology has become one of the most potent forces shaping the 21<sup>st</sup> century. It has been reported that unprecedented growth and development in information technology is transforming the way we access, store, disseminate and use information in our daily lives. Over the past few decades, the library environment has changed considerably in terms of collection, organization and services. The e-resources (both online and offline) have occupied a considerable space in the library collection, the transaction of library materials are fully automated, new web based services are offered by libraries to attract users participation in redesigning the library system and services and so on (Thanuskodi, 2011). Considering the exponential advancement in technology and its application to library and information services, utilization of e- resources are soon taking over the traditional prints.

The essence of ICT is to help individuals and societies achieve greater access to knowledge and ideas for the benefits of humanity. As an intellectual power house, the library cannot be divorced from this technology revolution. ICT which is synonymous with information provision stands in the best

position of aiding libraries to provide faculty, students, researchers, administrators and the general public with information at their finger tip. According to Ndukwe (2009) the full spectrum of ICT need to be accessible if everyone is to have equal opportunities for participation in everyday social and economic life in the information society.

Evidence suggests that people with disabilities face barriers in accessing the services they need in many settings. According to Ejedafiru and Isebe (2011), there are evidences that disabled persons are disadvantaged as far as access to ICTs, education and employment opportunities are concerned. Hence ensuring their equality of right and access to information and communication technology will have an enormous impact on their social and economic development in the countries of the world. The natural thing therefore, is an inclusive society notwithstanding their socio-political, economic, racial and physical condition. A society cannot be complete if a segment is marginalised in any form either politically, socially, educationally and technologically.

### **The State of the Physically Challenged**

An average of 10 per cent of the world's population is disabled and this number is likely to keep increasing due to increase in population, advancement in field of medicine and the increase in number of the aging population. According to the World Bank (2011) report, the number of disabled people is increasing because of a steadily ageing population, and the impact of violent conflict and the rapid spread of chronic disease. This report goes on to state that the world's population living with disability rates about 15%. Thus, people who are physically challenged represent a significant percentage of the population. This group of people has impairment which reduces their ability to effectively or safely use standard goods. Some of these impairments may be congenital or, through accident or disease. As a result of their limitations, they do not have equal opportunities for improving their standard of living. It has been observed that the benefits of ICT facilities are not reaching the physically challenged persons.

Evreinova et al (2004) stated that people with special needs are diminished in the ability to use standard consumer products and to gain an access to information sources efficiently. A greater number live in poverty and are marginalised in the society. According to the United Nations (2002), it is widely acknowledged that disabled people are among the poorest of the poor. This scenario depicts that there exists a disparity between people with disabilities and people with abilities, due to unemployment, less education or income. They are part of the wider society; this pre-supposes that they should equally benefit from the gains offered by ICT. After all, what is good for the geese is also good for the gander.

### **Nature and characteristics of physically challenged**

The physically challenged is a kind of euphemism and as such has no clear definition. Furthermore, the term physically challenged replaced the word disability or handicapped. The Collins English dictionary defines physical handicap as loss of or failure to develop a specific bodily function or functions, whether of movement, sensation, coordination, or speech, but excluding mental impairments or disabilities. According to the World Health Organization, a disability is an umbrella term, covering impairments, activity limitations, and participation restrictions. Disability indicates human limitation of one kind or other, in performing various tasks performed by other human being in general. It may be one or more of the kind of physical, mental or sensory one including visual and hearing (Mishra et al, 2011). According to the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995, Person with disability means a person suffering from not less than forty per cent of any disability as certified by a medical authority (any hospital or institution, specified for the purposes of this Act by notification by the appropriate Government).

According to the act, disability means blindness, low vision, leprosy-cured, hearing impairment, loco motor disability, mental retardation, mental illness. These are defined below.

- i. Blindness refers to a condition where a person suffers from any of the following conditions.
- ii. Total absence of sight.

- iii. Visual acuity not exceeding 6/60 or 20/200 (Snellen) in the better eye with correcting lenses.
- iv. Limitation of the field of vision subtending an angle of 20 degree or worse.
- v. Person with low vision means a person with impairment of visual functioning even after treatment or standard refractive correction but who uses or is potentially capable of using vision for the planning or execution of a task with appropriate assistive device.

Leprosy cured person means any person who has been cured of leprosy but is suffering from:

- (i) Loss of sensation in hands or feet as well as loss of sensation and paresis in the eye and eye-lid but with no manifest deformity.
- (ii) Manifest deformity and paresis; but having sufficient mobility in their hands and feet to enable them to engage in normal economic activity.
- (iii) Extreme physical deformity as well as advanced age which prevent him from undertaking any gainful occupation, and the expression "leprosy cured" shall be construed accordingly.

Hearing impairment means loss of sixty decibels or more in the better ear in the conversational range of frequencies. For the purpose of this research work, the physically challenged is defined as those with visual, hearing and mobility impairment.

### **The Physically Challenged and Nigerian Library Services**

In the Nigerian situation, it has been observed that disabled people and disability issues are viewed in terms of charity and welfare. Atinmo (2000) notes that government intervention, is often, very minimal and focuses more on establishment of special education schools where teachers of physically handicapped children are trained rather than provision of library materials for the visually impaired. Oyeum (2006) and Nok (1998) report that physical facilities in some Nigerian federal university libraries are inadequate for effective learning and facilities for the physically challenged are nearly non-existent with nothing in place to reverse the order. Eskay and Chima (2013) surveyed library and information service delivery in University of Nigeria Nsukka and found that there were no Braille books, talking books, talking newspapers or assistive technology. The only available materials were audio books which were not originally acquired to serve the visually impaired. To further compound the situation, Atinmo (2000) observed that only three out of the 36 state libraries in the federation have provision for library and information services to the blind.

The blind and visually impaired students are found at all educational institutions in primary and secondary schools, polytechnics, universities, and vocational training centers. They, like their sighted counterparts, are in search of academic laurels. Unfortunately, the production and distribution of information resources in alternative formats to meet the needs of these blind and visually impaired students is haphazard (Momodu, 2013). On the national scene, Lang (2008) observes that, there is no form of disability legislation that has been enacted within Nigeria despite the fact that two bills have been introduced into the National Assembly. Onyekwere (2015) in buttressing this fact reports that the bill protecting rights of Persons Living with Disabilities (PLWDs) is yet to be accented to, fueling speculations that it might suffer rejection for a second time. Consequently there is no form of social protection for disabled people in Nigeria which adds inferno to the level of poverty they encounter. Lang (2008) asserts that for the vast majority of disabled people living in Nigeria, particularly those in the rural areas, there is no access to disability services whatsoever. Lawal-Solarin (2012) in citing Okoli (2005) state that disabled people are living in an environment that is hostile to their yearnings and aspirations. Thus, it can be inferred that the physically challenged persons encounter difficulties in their bid to access conventional facilities.

### **Bridging the Gap: Role of Nigerian Libraries and Information Professionals**

*Inclusion of ICT facilities for the physically challenged:* In the present dispensation, ICT has become extremely useful in providing the physically challenged with access to information and create avenues for a better life. According to the LASA Information Systems Team, ICT is being used today as a tool for

improving the quality of life by improved efficiency and enhanced effectiveness. ICT makes them capable by providing the ability to access knowledge with the help of suitable digital media. ICT is playing very important role in communicating with peers, thereby promoting collaborative and social learning environment. ICT also helps disabled students in reading, writing, hearing and seeing process.

*Provision of Effective Library Services:* The major role of the library is the provision of information to its clients. Libraries should ensure that the information needs of the physically challenged are met with utmost precision. In fact, the disabled should be accorded preferences whenever they are in the library. Ekwelem (2013) opines that “as more people with disabilities attend higher institutions, it is incumbent upon library management to provide the same level of service to them as is provided to users without disabilities”. Hence, there is an increase in the use of libraries by the physically challenged and as such the need for enhanced assistance in their search for data-based materials.

*Personalised services:* To ensure that the physically challenged are given some sense of belonging, librarians should endeavour to render personalised services by aiding them in their search for information resources in the internet. This can be achieved through Selective Dissemination of Information, Current Awareness Services, SMS Alert, real time inquiry etc.

*Provision of Software for the Physically Challenged:* Nigerian libraries can take advantage of the opportunities provided by ICT to improve their services through procurement of software which are tailored to serve disabled persons. It has been recognized that different types of ICT tools assist people with disabilities by providing them with learning opportunities, capabilities and also increase potential of the disabled in different walks of life. Hassan-Raza (2010) writes that the internet and other electronic equipment makes it possible for visually impaired and blind people to use some EIS as do normal people.

*Use of Assistive Technology:* Assistive Technology can be used by the physically challenged for communication, research and education, recreation, greater independence and a more meaningful life. These devices are known to provide adaptive options in the form of computer hardware and software which help in eliminating barriers of disability and using a computer (Naik, 2013). Belay (2005) defines assistive/adaptive technology as items, equipment or products whether acquired or modified that is used to create or maintain or improve functional capabilities of individuals with disabilities. Some of the Assistive devices libraries can provide to improve their services to the physically challenged persons include keyboard and mouse adaptation, alternative keyboard, joystick, translation software etc. Others include Screen reader, Braille translation software, Braille writing equipment, Closed-circuit television, Braille embosser, Scanners (Lucky & Achebe, 2013). However, to ensure adequate services to the physically challenged, Nigerian libraries and information professionals will have to promote the use of these devices.

*Information Literacy/Media Literacy:* Assistive devices may not be too meaningful to persons with disabilities unless they are familiar with their use. Librarians will have to play the role of instructors as well as teach the necessary skills needed to manipulate these devices. In achieving this task, they have to be at home with information technologies in order to deliver the right services. This means that they have to be ICT literate. To be ICT literate, librarians will have to be proficient in using digital technology, communication tools or networks to access, manage and create information.

*Skill Acquisition:* As part of their role to bridge the gap between the physically challenged and their normal counterparts, Nigerian libraries and information professionals can collaborate with special educators to organize workshops on information literacy and skills acquisition for economic empowerment and self reliance.

**Challenges in Attaining an all Inclusive Society in Nigeria**

Several authors have discussed challenges of attaining an inclusive society for the physically challenged. Libraries which are supposed to be the comfort haven for the physically challenged in terms of information access and use have not lived up to their expectations. According to Ejedafiru and Isebe (2011), it is sadly ironic that the library – a medium that was intended to be accessible to everyone, including people with disabilities has evolved in a manner that often presents major accessibility barriers for them as well as for various other groups. Mishra, Sharma and Tripathi (2011) highlighted some limitations in providing the needed services as:

- i. Lack of specialized disabled friendly teacher training.
- ii. Limited flexibility in training options for people with disability.
- iii. Limited availability of specialized disabled friendly hardware and software resources, due to business constraints.
- iv. Lack of formal involvement of the government organizations and support structure for ICT for the disabled.
- v. Attitude barriers towards people with disability.
- vi. Lack of appropriate disabled friendly policies and their implementation.
- vii. Limitation of finances.

Scarcity of funds has often been a primary hindrance to several noble pursuits. This is because inadequacy of funds or lack of it has frustrated laudable projects in Nigerian academic libraries. Funds are needed to acquire, maintain and sustain technology. Fund is needed to acquire and maintain the specialized ICT facilities needed to serve the physically challenged. Adequate funds mean adequate provision of services. Ejidafu and Isebe (2011) mentioned constraints while using ICTs for the disabled as cost, poor state of ICT infrastructures, fear of using technology and difficulties with technology. Furthermore, Eskay and Chima (2013) lamented that it appears the education system in the developing countries including Nigeria has neither fully embraced nor adopted the technology associated with this special library service. This is apparently as a result of several issues which include: nonchalant attitudes of university authorities whose onus it is to finance needed facilities, librarians who should emphasize the need for such services and also out of their limited budget give some percentage to the provision of facilities in question.

**Conclusion**

The physically challenged are part of our society. Their information needs are not different from their 'normal' counterparts. They also strive for quality life despite their limitations. The new information age has transformed the way we think and act. In this age, disability is no longer inability. With the advent of technology and the rapid increase of multimedia on the web, many new opportunities are provided for people who are physically challenged. Nigerian libraries and information professionals are best suited to assist this group of special clientele through deployment of ICT facilities that respond to their peculiar needs.

**Recommendations**

In view of the above, this article recommends that libraries and information professionals must be at the fore of providing assistance to the physically challenged so that they are not left out in this era of unfathomable access to information. Funds should be mapped out for the procurement of ICT facilities and Assistive devices for persons with disabilities. If the physically challenged are to actively participate in the current ICT dispensation, if they are to be included in the scheme of affairs in the 21<sup>st</sup> century, there is need to provide and promote the use of assistive technologies in Nigerian libraries. Special library services to the physically challenged should be incorporated in Nigerian libraries be it public or academic.



There is need to train librarians on the use of assistive technologies so they can be equipped to help those with disabilities.





## REFERENCES

- Atinmo, M.A. (2000). Including the excluded: The challenges of library and information services for visually handicapped readers in Nigeria in the new millennium. *Paper presented at the International Special Education Congress*, Manchaester, UK, July 2000.
- Belay, T. E. (2005). *African perspective on visual impairments, ICT and policies: a personal experience, a variety of perspectives and technological solution*. A Paper presented at the world summit on the information society workshop on ICT and persons with disabilities. Kran Exhibition Park, Tunis, Tunisia. 16, Nov. 11p.
- Ekwelem, V. O. (2013). Library services to disabled students in the digital era: challenges for outcome assessment. *Library Philosophy and Practice (e-journal)*. Paper 970. <http://digitalcommons.unl.edu/libphilprac/970>
- Ejedafiru, E.F. & Isebe, M.L.E. (2011). ICT enhanced library services: Opportunities and challenges for disabled persons in Nigeria. *Crown Research in Education*, 1: 01- 04.
- Eskay, M. & Chima, J. N. (2013). Library and information service delivery for the blind and physically challenged in University of Nigeria Nsukka library. *European Academic Research*, 1(5): 625 – 635. Aug.
- Evreinova, T. (2004). Four-key text entry for physically challenged people. Retrieved from [citeseer.ist.edu/viewdoc/summary?doi=10.1.1.103.1000](http://citeseer.ist.edu/viewdoc/summary?doi=10.1.1.103.1000) United State
- Hassan-Raza, Y.I. (2010). Adoption of Electronic information services in library by virtually impaired people. Department of Business Administration and Social Science Division of Information Systems Sciences. Unpublished Master Thesis. Lulea University of Technology.
- [http://www.uch.ac.uk/ic-cer/download/oads/dfidNigeria report](http://www.uch.ac.uk/ic-cer/download/oads/dfidNigeria%20report.pdf).
- Lang, R. & Upah, L. (2008). Scoping study: disability issues in Nigeria. British Department for International Development (DFID) [http://www.ucl.ac.uk/lcccr/downloads/dfidNigeria report](http://www.ucl.ac.uk/lcccr/downloads/dfidNigeria%20report.pdf).
- LASA Information Systems Team (2014). *Making Computers Accessible for Disabled People*, <http://www.ictknowledgebase.org.uk/computeraccessibilitytips> Accessed on 20-04-2015
- Lawal-Solarin, E.O. (2012). A survey of library and information services to physically-challenged students in academic libraries in Ogun State, Nigeria. *Library Philosophy and Practice (e-journal)*. Paper 699.
- Lucky, A.T. & Achebe, N.E.E. (2013). Information service delivery to the visually impaired: a case study of hope for the blind foundation Wusasa, Zaria (Nigeria). *Research Journal of Information Technology*, 5(1):18-23.
- Mishra, M.P., Sharma, V.K. & Tripathi, R.C. (2011). ICT as a tool for teaching and learning in respect of learner with disability. Retrieved from [www.col.org/pcf6/fp/zIN1307.doc](http://www.col.org/pcf6/fp/zIN1307.doc)
- Momodu, O.M. (2013). The physically challenged and the dearth of relevant facilities in Nigerian libraries. *International Journal of Basic, Applied and Innovative Research*, 2(2):15-19.
- Ndukwe E (2009). *National Summit on ICTs and accessibility for persons with special needs and the elderly*. Nigeria Communications Commission.
- Nok, G. I. (1998). Assessment of Physical Facilities and Readers' satisfaction in Kashim Ibrahim Library. Ahmadu Bello University, Zaria. *Library Focus* 1(15&16): 1-11.
- Onyekwere, J. (2015, March 9). Persons with disabilities bill and the burden of presidential assent. *The Guardian*. Retrieved from <http://www.ngrguardiannews.com>
- Oyedum, G.U. (2006). Assessment of Physical Facilities and reader's satisfaction: a case study of Federal University of Technology, Minna Library. *Borno Library, Archival and Information Science Journal*, 5(1): 67-75.
- Thanuskodi, S. (2011). ICT literacy among library professionals in the engineering college libraries of Tamil Nadu: an analytical study. *International Journal of Digital Library Service*. 1(2): 132-141