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Visually Impaired Information Users in Nigeria: Characteristics, Challenges of Inclusion and the Dilemma of the Excluded

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VISUALLY IMPAIRED INFORMATION USERS IN NIGERIA: Characteristics, Challenges of inclusion and the Dilemma of the excluded

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Abstract

The visually impaired in Nigeria are faced with the problem of access to information among others. Very little is known about their personal characteristics; the problem of inclusion and the dilemma of whether to adopt technology or not has left them with intractable challenges. This study investigates visually impaired information users in Nigeria with emphasis on their personal characteristics, the challenges of inclusion and the Dilemma posed by technology. Survey research design was adopted and the study purposively focused on southwestern Nigeria. Using stratified proportionate random sampling technique, data were gathered using interviews and a questionnaire from fourteen selected libraries, stratified into non-governmental, public, tertiary institutions and secondary schools. Out of 503 copies of questionnaire, 401 (71.3%) was used for the study. The study revealed that visually impaired information users are mainly males (67.1%) and single (75.5%). 57% are below twenty five years; 224 (54%) are totally blind. They are mainly artisan/, craftsmen, craft-instructors and teachers. Government has paid lip service to inclusion and left her duties in the hands of private players and a few NGOs. The visually impaired are clearly in a dilemma of adopting technology or sticking to the familiar traditional formats of information access which are very limited in supply and has failed to address the information needs over the years .The study recommends formulation of inclusive policies, collaboration of government and relevant stakeholders towards widening social participation for the visually impaired in Nigeria.

Keywords: Visually impaired, Information users, Characteristics, Inclusion, Nigeria.

Introduction

Persons with visual impairment (PVI) have been known to experience functional loss of vision or visual incapability which cannot be rectified by refractive corrections, medications or surgery (Adetoro, 2009). Visually impaired persons experience eye disorders which include retina degeneration, albinism, cataracts, glaucoma, muscular problems that result in visual disturbances, cornea disorders, diabetic retinopathy, congenital disorders and infection (Arditi and Rosenthal, 1998). They contend with visual system defects which affect their individual ability to perform activities of daily living. These conditions include partial sightedness, low vision and total blindness.

Unlike sighted persons, the visually impaired rely on alternative formats such as Braille, large prints and talking book or audio recordings to meet their reading needs. In recent times, technology has provided for the visually impaired new opportunities for a much wider access to information. They cannot use the medium of the sighted owing to the consequence of their visual impairment which result in their being blind or partially sighted.

In Nigeria, a few of the visually impaired population have received formal education and are capable of reading or writing Braille. Majority resort to begging on streets as a means of livelihood (Adetoro, 2009). Those who are educated depend on the goodness of charities, non-governmental organizations, (NGOs) philanthropists to provide them with information materials. Many are provided with information materials via libraries in schools, public libraries and institutions providing information services to the visually impaired in Nigeria.

Relative to the population of the visually impaired in Nigeria, those who use information materials via libraries (private or government owned) are few. This study is therefore focused on the visually impaired who are educated and capable of using information materials in libraries and other information centers. Libraries providing information materials for the visually impaired in Nigeria are public libraries, libraries of NGOs and libraries in educational institutions (Primary, Secondary and Tertiary institutions).

Libraries for the visually impaired in Nigeria are faced with problems of meeting the high demand for information materials in alternative format. They are believed to have inadequate alternative formats, obsolete facilities for transcription and provision of information material for use. The consequence of the foregoing is that visually impaired persons who seek information are provided with what is available and not what they want to read (Adetoro, 2009)

Technology in recent times has impacted positively on the lives of visually impaired (VI) with regards to information use, education and lifelong learning. It would not only expand the world of the VI, it can serve as a great equalizer (Olukotun, 2004). There are

millions of VI persons in the world who need access to information materials for the same reasons as sighted people (Braizer, 2007). But, only five percent of the world's literatures make it into alternative format. Kavanagh and Christensen Skold (2005) lamented that 95% of the world's books are never made available in accessible format for the VI. This situation is prevalent in almost all countries. The extent to which this level of information provision meets readers' needs is definitely of concern. What is certain is that this scenario is not equitable. The provision of appropriate and adequate information services to the VI is underpinned by several drivers, all of which to some extent are based on the philosophy of equity, inclusion and adherence to best practices (Davis, 2007).

Legislations in several countries have provided the mandatory framework for equalization of opportunities. They include:

- **Disability Discriminatory Act, 1995; the Special Education Needs and Disability Act 2001 both in the United Kingdom**
- **Americans with Disability Act 1990 in the USA (Davis, 2007).**

The foregoing and other formal expressions of interest regarding equal access and opportunities for PVI from organizations such as the United Nations (UN) with its convention to promote and protect rights and dignity of persons with disabilities (UN, 2005). All of these sources and more in form of recommended codes of practice for service delivery to PVI has made it imperative for service providers to have salient evidence about how and why PVI use information, and how it can be best provided (Machell, 1995).

In many countries there is the strong belief that the rights of the VI for equal access to information and a greater role in the development process will be secured with the use and implementation of Assistive Technology. Access to the internet had also presented new possibilities for information for the print disabled persons in the same manner as sighted persons. However, it is worrisome that several websites do not meet even the basic standard for accessibility; as PVI also lags behind the rest of the world in terms of access to computers (Braizer, 2007).

Assistive technology has helped alleviate the information problem of PVI. Belay (2005) conceives 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. Indeed, studies (Gerber, 2003; De Azevedo, 2002) have shown that assistive technologies help people with disability to enjoy a more satisfactory life.

To put the situation of the visually impaired information users into proper perspective, it is pertinent to dig into some relevant characteristics and the challenges of inclusion of the visually impaired themselves on one hand and the dilemma brought about by the VI inability to access and use technology as a means of information access equalization. This could provide explanations for a more realistic understanding of the plight of visually impaired persons in Nigeria.

Statement of the problem

Persons with visual impairment are faced with the challenges of inclusion and perception of society with regard to their personal characteristics which has not been encouraging. Indeed, these perceptions have led to their exclusion from all forms of social participation including, to a great extent, the use of information in libraries and other information centers.

There is the need for a proper understanding of the characteristics of visually impaired persons generally, and particularly those who are capable of information use through libraries and other information centers. A good knowledge of their demographic characteristics and other personal characteristics will assist the society and indeed the government to better appreciate the situation of the visually impaired and provide information material for their use. Though technology offers an opportunity for equalization of access to information, the visually impaired in Nigeria are at a crossroad of either adopting technology (assistive technology) which is expensive and not easily accessible or resorting to traditional alternative formats which provides limited access to information.

Objective of the study

The general objective of the study is to investigate the visually impaired information users in Nigeria with a view to understanding their characteristics, their challenges in the area of inclusion and the dilemma they now face in accessing Information.

The specific objectives of the study are to:

1. Find out the demographic characteristics (Age, Sex, Marital Status, Educational Qualification and Nature of visual impairment) of the visually impaired information users via libraries in Nigeria.
2. Find out the occupation of the visually impaired information users in Nigeria.
3. Ascertain the challenges of inclusion in information services provision to visually impaired information users

4. Determine the dilemma posed by technology and traditional formats in providing access to information

Literature Review

Visual impairment as a concept is often misconstrued by the larger society. According to the Royal National Institute for the Blind RNIB (2006), the term refers to people with irretrievable sight loss. This definition covers a wide spectrum of impairments. Abosi and Ozoji (1985) clarifies that the visually impaired includes those who are totally blind, low visioned, partially sighted and those who have short sight, long sight or astigmatism. The visually impaired does not include those whose sight problems can be corrected by spectacles or contact lenses, though it does not include those whose sight might be improved by medical intervention (RNIB, 2006).

The population of persons with visual impairment in Nigeria, to many writers and scholars including Akobundu (1996) and Durojaiye (2002) remains unknown. Indeed, there is no consensus on the estimated population of persons with visual impairment in Nigeria. Adimorah (1980) believed that millions of Nigerians have gone blind and millions also suffer from various eye diseases. About 3% of Nigeria's population is estimated to be blind (Adima, 1989) while Atinmo (2002) is of the opinion that about 3 million Nigerians are visually impaired and that few of these receive formal education; majority resort to begging on the streets.

Four different categories of persons with visual impairment are identifiable in Nigeria. These are:

1. Those in institution of learning, at primary and secondary schools, and those in tertiary institutions, which include colleges of education, polytechnics, universities, vocational and technical centres.
2. Those who have had formal education and are either employed or unemployed.
3. Those who became blind by accidents, diseases or old age. They may have been in regular employment or reached retirement age, who need rehabilitation services.
4. The illiterates, who represent the majority and who are mostly begging on the streets. These include all age groups of people; children, men and women (Atinmo, 2002).

Majority of persons with visual impairment in Nigeria who are capable of using information from recognized sources are single and belong to the male gender; they are young and majority being in school, especially secondary schools and tertiary institutions (Adetoro, 2009). Visual impairment in traceable to heredity, diseases, infections, age, nutritional deficiency, and

occupation/environmental hazards (Okeke, 2001). The German measles (rubella) which attack pregnant women, infections, STDs, congenital diseases of cornea, lens, retina or optic nerve and some metabolic disorders as a result of vitamin A, B, and C deficiency, prolong labour and degenerated diseases of the retina among others are responsible for many cases of visual impairment.

Persons with visual impairment in Nigeria, being mostly uneducated, suffer double disadvantage because they become more dependent and isolated from educational, social and cultural life of the community (Obani, 2002). Atinmo (2002) posits that educational opportunities for all handicapped persons is limited to provision of teachers of the handicapped at primary, secondary and tertiary levels at Federal College of Education (special) Oyo as well as the establishment of departments of special education in few Nigerian Universities. Current practices in the education of persons with visual impairment seem to suggest that the visually impaired are generally put at disadvantage in teaching and learning situations.

Persons with visual impairment among other categories of disabled persons in Nigeria lag behind in having adequate, relevant and accurate information (Onwuchekwa, 1999). She adds that among the visually impaired, the blind are regarded as the lowest in hierarchy. Their disability makes access to information difficult (Aderinto, 1997). With regards to information provision, library services are generally rated low. Information materials such as Braille, large prints, audio-recordings and electronic resources are scarce and cannot meet the needs of persons with visual impairment (Agbaje 1996; Basharu, 1998).

Literature has also revealed that visually impaired information users have used less of Braille in favour of audio devices in recent times, in many countries (Adetoro, 2009). Providers and producers of Braille in the United States (USA) have decried the decline in the use of Braille and have agitated for increased provision of Braille for use (Rex, 1989; Spungin 1989; Pierce, 1991) Ajobiewe (1999) opined that the provision and use of alternative format and availability of reading aids, volunteers and transcription services in libraries will go a long way in making information accessible to visually impaired users in Nigeria.

Methodology

The study is a survey and it purposively focused on southwestern geo-political zone of Nigeria. The population of study is 563 persons with visual impairment (the blind and partially sighted) who are users of information materials in fourteen (14) selected libraries for the study. The libraries were selected for the study because they are the ones with appreciable number of

visually impaired users useful for this study. The population was determined through a preliminary study.

Using stratified proportionate random sampling technique, the libraries were stratified into two (2) NGO libraries, four (4) public libraries, two (2) tertiary institution libraries and six (6) secondary school libraries. A structured questionnaire was used to elicit desired information from the study participants. This was followed by group interviews to better understand their challenges with regards to inclusion and the dilemma occasioned by assistive technology for information access. The questionnaires were read to the hearing of the participants and their responses were made on the questionnaire by the researcher and his assistants. The interview responses were carefully documented and analyzed. Out of 563 copies of the questionnaire administered, 401 (71.3%) were successfully administered and used for the study. Frequency counts and percentages were used for analysis.

Table 1 Profile and population of selected libraries for the study.

S/No	Libraries	Category of Libraries	Population of Persons with visual impairment
1	ANWAB Library	An NGO Library	80
2	Inlaks Library for the visually handicapped.	An NGO Library	100
3	Oyo State library Board	Public library	51
4	Ekiti State Library Board	Public library	40
5	Osun State Library Board	Public library	30
6	Ondo State Library board	Public library	45
7	University of Ibadan	Tertiary Institution	80
8	Federal College of Education (Special) Oyo library	Tertiary Institution	14
9	Queen College	Tertiary Institution	15
10	Kings College	Secondary School	20
11	Federal Government College, Ijanikin	Secondary School	20

12	Yewa College	Secondary School	20
13	Adeniran Memorial Grammar School	Secondary school	18
14	Owo High School	Secondary school	30

Source: field works 2008 n = 563

Result

Democratic characteristics of visually impaired information users in the libraries

- **Sex:**

  The study showed that 265 (67.1%) of the respondents were male while 136 (32.9%) were female. Further analysis revealed that adult respondents were 297 (74%) while those in secondary school constitute 104 (26%) of the participants.

- **Age:**

Those within the age range of 21-25 years constitute the highest number of respondents for the study with 134 (33.4%) visually impaired persons; followed by those within the age bracket of 16-20 years with 95 (23.6%). Others include the age range of 26-30 years 74 (18.4%); 31-40 years with 45 (11.2%) of the respondent. Those who are 40 years and above were 36 (8.9%) while the least age range of respondents were those within 11-15 years, 17 (4.2%)

- **Marital Status:**

  Majority of the respondents 303 (75.5%) were single while 98 (24.4%) were married.

- **Educational Qualification:**

  A total of 104 (26%) of the respondents are secondary school students while 90 (22.4%) had completed secondary school education. A mere 3 (0.7%) of the respondents had post-graduate qualifications; 43 (11%) had bachelors degree while majority 161 (40%) are either National Certificate in Education (NCE) holders or Ordinary National Diploma OND holders. In effect, about 207 (51%) of the respondents has post-secondary qualifications.

- **Nature of Visual Impairment:**

With regard to the nature of respondents' visual impairment, 224 (54%) described themselves as totally blind. These are in the majority. A total of 177 (46%) said they are partially sighted.

Table 2: Demographic Characteristics of Respondents

S/N	Specific Characteristic	No of Respondents	%
1.	**Sex of Respondents:**		
	Male	265	67.1
	Female	136	32.9
	Total	401	100
2.	**Age of Respondents:**		
	11-15 years	17	4.2
	16-20 years	95	23.6
	21-25 years	134	33.4
	26-30 years	74	18.4
	31-40 years	45	11.2
	40 and above	36	8.9
	Total	401	100
3.	**Marital Status of Respondents:**		
	Single	303	75.5
	Married	98	24.4
	Total	401	100
4.	**Educational Qualification:**		
	Secondary school Students	104	25.9
	GCE'OL/SSCE	90	22.4
	NCE/OND	161	40.1
	B.SC/B.A/HND	43	10.7
	MA/MSC/M/ED	3	0.7
	Total	401	100
5.	**Nature of Visual Impairment:**		
	Totally Blind	224	54.3
	Partially Sighted	177	45.7
	Total	401	100

Source: field work 2008

- **Occupation of visually impaired information users:**

The study revealed that aside the 104 (26%) of the respondents who are students in secondary schools, 127 (31.7%) are either artisans or into one craft or the other; they have attended vocational training schools/centers to learn a craft. 160 (40%) are teachers in primary and secondary schools while a mere 10 (2.4%) are professionals such as broadcasters, lawyers, etc.

Table 3: Occupation of visually impaired information users in libraries

Occupation	No of respondents	%
Secondary school students	104	26
Craftsmanship/artisans	127	31.7
Teachers (Primary & Secondary Schools)	160	40

Other professions	10	2.5
Total	401	100

Challenges of Inclusion

Interview sessions with regards to the extent to which the visually impaired are included in societal activities and in information services provision in particular was conducted in all the schools , libraries and institutions visited. The interview revealed that:

Opportunities for schooling both at primary secondary and tertiary levels are very limited.

Virtually all the schools investigated have very little to show as information resources; resources are inadequate, old and obsolete.

The visually impaired students lack any form of individualized instruction, which places them at a disadvantage in an integrated school systems.

Most of the public libraries keep only Braille resources, most of which are obsolete and do not address the needs of the visually impaired.

Specialized libraries are a few. There are just two libraries for the visually impaired in southwest Nigeria. This means information access is limited.

Nigerian government had been negligent in fulfilling that part of its educational policy which promised to equalize educational opportunities for all children regardless of their physical, mental and emotional disabilities.

Non-governmental Organizations (NGOs) working with the visually impaired are not supported by government to widen and improve services

The visually impaired individually scout around for readable materials for themselves. Those who can afford them buy Braille editions of their texts from Nigerwives Book Production Centre, which sells to them at the price of the print edition. Others request for Brailed or photocopied reading materials from the Anglo-Nigerian Welfare Association

for the Blind (ANWAB); many others do without books because access to these materials is practically impossible for them.

The Technology Dilemma

The group interviews focused on the ease of access to assistive technology and ability to use the technology on one hand and the alternative of sticking to the traditional accessible formats of Braille, talking books and large prints. The participants were unanimous in responding as follows:

That assistive technologies are costly and beyond the reach of most of the visually impaired. This is because they are poor.

That the government schools and institutions provide some Assistive technology for use

That very limited training on the use of these technologies is available.

A few NGOs and private institutions are the ones providing internet services and access to a few technologies

That the traditional formats are limited in supply despite the high demand for materials in libraries.

That library for the blind and other institutions providing information services offer available materials and not those which address information needs of users

The import of the foregoing is that the visually impaired are in a dilemma of adopting technology which is clearly not affordable, accessible and perceived as difficult to use and sticking to the familiar traditional formats of information access which are very limited in supply and has failed to address the information needs over the years

Discussion

The sex of visually impaired information users surveyed showed that males were in the majority which indicates that men are more prone to visual impairment than females in Nigeria. This is consistent with Fasina and Ajaiyeoba (2003) as well as Adegbehinde, Fajemilehin Ojofeitimi and Bisiriyu (2006) who reported that blindness was twice as common in men as in women in Osun State, Nigeria.

Most of the respondents were young and over 70% of them are under the age of forty (40) years and still in their productive years and should still be active information seekers and users. This is instructive to the libraries providing information materials for the visually impaired in Nigeria that persons with visual impairment would use materials if available in the right variety, quantity and quality.

They are mainly artisans/ craftsmen/ craft instructors, teachers and students; very few are into other professions. This is a clear pointer to the fact that occupational and professional training opportunities and indeed information opportunities for persons with visual impairment in Nigeria in limited and in some cases non-existent. The visually impaired in Nigeria are object of deliberate and inadvertent educational and occupational discrimination.

Persons with visual impairment surveyed are mainly single. Their visual impairment status does not guarantee easy suitors thus, marriage is visually delayed. Indeed, cultural inhibitions and stigmatization have ensured that they marry rather late. People just do not find it socially pleasing getting married to persons with visual impairment in African settings.

Few of them have university degrees; many are NCE holders, school certificate and craft certificate holders. Their educational limitation could be due to shortage of educational opportunities, information materials and resources. There are limited admission spaces for persons with visual impairment in Nigerian regular schools. Tertiary educational opportunities are limited to training as teachers.

There are more visually impaired information users in the study who are totally blind. The partially sighted persons are fewer and rely on Braille and talking books/audio recordings because large prints materials are very scarce in Nigeria. Information materials in alternative format for persons with visual impairment in Nigeria are in very short supply. The few materials available for use is obsolete and do not meet the needs of the users. An explorative study (Atinmo, 2007) confirmed that there is acute shortage of information materials for the visually impaired in Nigeria.

The challenges of inclusion suggest that government has paid lip service to inclusion in Nigeria. It has abdicated its responsibilities to all persons with disabilities and left it in the hands of private players who lack the capacity to widen the reach of the activities and services. By this, many of the visually impaired in Nigeria do not have access to what is available to the sighted and have been removed from all sorts of social participation.

Opportunities for visually impaired with regard to use of information and communications technology (ICT) and access to information are growing. However, the challenges of assimilation and use of ICT appear to be a difficult one. In Nigeria, the visually

impaired are faced with intractable challenges. In fact, they are in a dilemma. First and foremost, it is important that ICT adoption and use by the visually impaired in Nigeria must be based on an understanding of user's requirement and need for enhanced inclusion.

The specific challenges to achieving the foregoing include limited economic resources on the part of institutions and the visually impaired persons themselves, their low level of literacy, limited ICT assimilation and the general lack of understanding of the capacity of persons with disabilities have become obstacles to ICT adoption and use. The challenges imposed by ICT on the visually impaired are predicated on accessibility (Sandhu, Saarnio and Wiman, 2001). Users have to adapt to the norms, which are always set through the design and operation of technology.

In many African countries as in Nigeria, access to technology by the visually impaired are often neglected by the government and left in the hands of a few underequipped institutions which lack the resources for meaningful intervention. In today's digital environment, the gap between the visually impaired and their sighted peers in terms of access to information will inexorably widen.

In Nigeria, majority of the visually impaired are poor and as such affordability of technology constitute another challenge. The array of assistive technology/devices that help the visually impaired to use computers has grown, however the prohibitive cost of these products prevents their widespread deployment and use. This techno-economic reality has resulted in an imbalanced situation and a society of people who have access and those who do not.

Aside the problems of access, the visually impaired are more disadvantaged because of their general functional limitations, especially their lack of skills required to operate and use ICT tools. In Nigeria as it were, and in many developing countries, many times the problem is not lack of potential or lower intellect of the visually impaired, but total lack of opportunities. Should the visually impaired resort to the traditional alternative formats which has provided them very limited access to information?

Conclusion and Recommendations

This study has shown that visually impaired information users through libraries in Nigeria are mainly young, youthful and single. Limited educational opportunities have restricted them to being teachers, craftsmen/ artisans, craft instructors while many others are students. Their educational attainment has also been affected by societal discrimination such that few of them become university graduates. Majority of those who are educated stop at sub-degree, post secondary education. Most of the respondents in the study are totally blind and became visually

impaired as children. Though many others had congenital conditions, diseases or infections; illnesses were the other major causes of visual impairment.

The findings of this study have implication for policy and its implementation by government in the direction of information provision for visually impaired persons and for their inclusion in all activities and programs of government. The society needs to turn a new leaf and ensure that the visually impaired are included in all forms of human social participation. The findings of the study will assist libraries and institutions providing information materials and services for the visually impaired to come to terms with the demographics and other useful characteristics of the visually impaired for planning and control purposes. They should plan for them adequately in terms of acquiring, organizing and making available useful, timely and relevant information. These libraries and institutions must place high premium on easy access to available resources with use of assistive technology.

Based on the findings of this study, it is therefore recommended that governments at all levels in Nigeria should formulate inclusive policies and implement inclusive programs. They should also allocate resources for building of schools and training of more teachers for the visually impaired.

Governments at all levels should also collaborate with stakeholders and private institutions providing services to persons with visual impairment in Nigeria in widening social participation and educational opportunities for the visually impaired. Because information is crucial to the survival of persons with visual impairment as citizens, libraries and schools for the visually impaired should come together in a co-operative strategy with relevant donors to widen access to alternative formats and improve upon information availability and use by the visual impairment in Nigeria.

References

Abang, T.B. 1988. Disablement, Disability and the Nigeria society. *Disability and society*. 3. 1: 71-77.

Abosi, O.C. and Ozoji, E.D. 1985. *Educating the blind: A descriptive approach*. Ibadan: Spectrum.

Adegbehingbe, B.O et al. 2006. Blindness and Visual impairment among the elderly in Ife-Ijesha zone of Osun state, Nigeria. *Indian Journal or Ophthalmology.* 54, 1: 59-62.

Aderinto, M.A. 1997. ‘‘The Role of Academic Libraries in Programme Accreditation: An Overview’’. *Journal of Issues in Special Education*. 3, 2.:34-54

Adetoro, A.A. 2009 ‘‘Relationship among reading interest, information materials availability and alternative format utilization by persons with visual impairment in selected libraries in southwestern, Nigeria’’. Ph.D Thesis, University of Ibadan, Nigeria.

Adetoro N. 2009 ‘‘Information and communications technology (ICT) as an access equalizer of information: opportunities and challenges for Nigeria’s persons with visual impairment’’. *The information Technologist* 6 1: 115-122.

Adima, E.E. 1989. *Special Education*. Ibadan: NPS Educational.

Adimorah, E.N.O. 1980. ‘‘Library and Information Services for the visually handicapped in Nigeria’’. Paper presented at a seminar in library services to visually handicapped readers in African developing countries. Tanzania November, 3-13

Agbaje, S.A 1996. ‘‘Access to and Retrieval of library Resources by the blind in selected higher institutions in Nigeria’’. Current Researches on Special Education in Nigeria. Edited by T.C. Obani Oyo: FCE Special. 188 – 195.

Ajobiewe, T. 1999. ‘‘Library facilities for the Blind in Nigeria: Challenges Ahead’’. *The Exceptional Children.* 3, 1:188-198

Akobundu, R.C. 1996. ‘‘Vocational preparation needs of the disabled: College students perception’’. *Journal of Research in Special Education*, 1, 1: 31 – 37.

Arditi, A. and Rosenthal, B. 1998 ‘‘Developing an Objective definition of visual impairment in vision 96’’: Proceedings of the International low vision conference. ONCE pp. 331 – 334 Accessed from http.www.encyclopedia the free dictionary.com/visual impairment.

Atinmo M.I (2007) ‘‘Setting up a computerized catalog and distribution database of alternative format materials for blind and visually impaired person in Nigeria’’. *Library Trends*. 55 4: 830-846.

Atinmo, M.I 2002. ‘‘Nigeria National Proposal for Visually Impaired Persons’’. A proposal for IFLA / Ulverscoff Foundation for the Fredrick Thorpe Award for organisation p8.

Basharu, D. 1988. Library facilities for the blind: Expectations of the visually handicapped in the provision of reading materials. Paper presented at the seminar on vocational training centre for the blind. Lagos, November 19th

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 November 16

Braizer, H 2007. ‘‘The role and activities of the IFLA Libraries for the Blind section. *Library Trends,* 55 4: 864-878.

Davis J.E 2007. ‘‘An Overview of International Research into the Library and information needs of visually impaired people’’. ***Library Trends***. 55 4:.785-795

De Azeredo, M.M.V. 2000 ‘‘Parameters of effectiveness of special software to enable full access for people with impairment’’. Paper presented at 11th conference on new visions moving toward an improved community. Noordwayen Holland, August 22 July-2

Durojaiye, J.A.2002. ‘‘Visually handicapped children in inclusive educational setting in Nigeria, any hope?’’ *Journal of Issues in special Education*. 4, 11: 107 – 116.

Fasina, P and Ajaiyeoba, O 2005. The prevalence and causes of blindness and low vision in Ogun State, Nigeria. *African Journal of Biomedical Research*. 6, 2: 63 – 67.

Gerber, E 2003. ‘‘The benefits of and barriers to computer use for individuals who are visually Impaired’’. *Journal of Visual Impairment and Blindness* 97: 9

Kavanagh R and Christensen Skold, B 2005. ‘‘Libraries for the blind in the information age: guidelines for development’’ (Prof. Rep. No. 86.) The Hague, Netherlands: IFLA.

Machell, J 1995. ‘‘Library and information services for visually impaired people: National Guidelines’’. London: library Association Publishing

Obani, T.C. 2002. ‘‘Developing Library and Information Policy for the Visually Impaired in Nigeria’’. *Journal of the Association of Libraries for the Visually Impaired.* 1, 2:1-7.

Oduntan A.O. 2005. ‘‘Prevalence and causes by low vision and blindness worldwide. *South African optometrist*. 62, 2: 44 – 54

Okeke, B.A 2001. ‘‘ Essential of special education in Nigeria’’. Lagos: Afrorbis publication.

Olukotun, J.O 2004. ‘‘The need for expanded core curriculum for visually impaired learner in Nigerian Schools’’ .*Journal of Association of Libraries for the Visually Impaired.* 3,1:

43-53

Onwuchekwa, J.N. 1999. ‘‘The role of education technology in educating the disabled’’. Paper delivered at a conference on educational technology, Ibadan, Nigeria.

Pierce, B. 1991. ‘‘APH Figures shows braille is declining’’. *Braille Monitor* . 10: 390-391.

Rex, E.J. 1989. ‘‘Issues related to literacy of legally blind learners’’. *Journal of visual impairment and blindness.* 83: 306-313.

RNIB. 2006. ‘‘Making Your Teaching Inclusive: What is visual impairment’’? accfrom http//www.open.ac.uk/inclusive teaching/pages/ understanding and awareness/what…

Sandhu J.S, Saarnio I and Wiman R 2001 ‘‘Information and communication technologies and disability in Developing countries’’ . Accessed from http// site resources. World bank.org/DISABILITY/resources/280658-117260 9480904/information commsandhll.pdf.

Spungin, S.J. 1989. ‘‘*Braille literacy: issues for blind persons, families, professionals, and producers of braille’’*. New York: AFB.