

# Availability and use of information materials by persons with visual impairment in Nigeria

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## Abstract

Information materials for the visually impaired must be transcribed into alternative format before they are made available for use. The use of information materials in alternative format by the visually impaired is limited by availability. The study investigates the availability and use of information materials in alternative format by persons with visual impairment in selected libraries in Nigeria. The study is a survey. Fourteen purposively selected libraries were used based on the population of their visually impaired users who make use of alternative formats. Using a stratified proportionate random sampling technique, the chosen libraries were stratified into Non-governmental organizations, public, tertiary institutions and secondary schools. A structured questionnaire and an observation schedule were used for data collection. Out of the 563 copies of questionnaire administered, 401 (71.3%) were successfully completed and used for the study. Result revealed that braille materials (69.9%) and talking books/audio recordings (43.5%) were not readily available in the libraries. Large prints are not available (79.3%). Braille materials had high level of utilization ( $\bar{x}=4.44$ ;  $SD=1.21$ ). Information material availability had significant positive relationship with use ( $r=0.224$ ;  $p<0.05$ ). Information materials availability in the libraries cannot ensure and sustain adequate utilisation levels. The study recommends increased transcription, balanced collection of alternative formats and resource sharing.

**Keywords:** Information materials availability, Alternative formats, Utilization, Persons with visual impairment, Nigeria.

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## Introduction

Persons with visual impairment in every society are people with vision loss that constitute significant limitations to visual capabilities, resulting from diseases trauma or a congenital or degenerative condition that cannot be corrected by

conventional means (Arditi and Rosenthal, 1998). The provision of information materials to the visually impaired or people with print disabilities has received attention world over. Since Louis Braille modified an earlier invention of Charles Barbier to produce Braille in 1892. Information materials for persons with visual impairment are converted into alternative formats such as braille, talking books/audio recordings, large prints and e-resources to meet their reading needs. Braille is a six embossed dots tactile device used by the blind as a medium of reading and communication. Talking books are audio recordings on tapes, cassettes and compact disk from books and other materials which the usually impaired can listen to, thereby providing the visually impaired with opportunity of reading through listening. Large prints have their print size enlarged such that this becomes visible to the partially sighted and low visioned.

Availability of information materials for the use of persons with visual impairment in many countries is premised on equal access with the sighted, though what is available world over is a far cry from the desired. Brazier (2003) and Brunson (2005) have evidence that availability of information materials for the use of visually impaired in advanced countries is grossly inadequate.

In Nigeria, the situation is worse as persons with visual impairment rely on the goodness of charities and philanthropist to provide them with information materials. Few schools in Nigeria make available information materials for visually impaired students. There is acute shortage of information materials and other information resources in alternative format at the primary, secondary and tertiary levels (Atinmo, 2002). Libraries of non-governmental organisations (NGOs) and private association such as Nigerwives, an association of foreign women married to Nigerian men, Anglo-Nigeria welfare association for the Blind (ANWAB); Nigeria society for the Blind, hope for the Blind, Gindiri material centre for the Blind, association of libraries for the visually impaired (ALVI) and few others also make information materials in alternative format available for use by persons with visual impairment in Nigeria. These organization and other public libraries providing information services to the visually impaired are ill equipped to cope with the yearning of the visually impaired for use of information materials (Basharu, 2000). The effort of these libraries has not had significant impact on the visually impaired population hence the clamour for adequate and sustainable services (Adetoro, 2004).

The demand for alternative format use by person with visual impairment in Nigeria appears to be high, but it is believed that the extent of utilization of materials are limited by availability. The libraries and institutions who make available alternative formats are also the ones promoting its use through constant production and distributing of information materials in alternative formats (Adetoro, 2009).

## **Statement of the problem**

There is ample evidence through observation and literature which shows that there is possibly acute shortage of information materials available to persons with visual impairment in Nigeria. This is because a few materials get converted into alternative formats for use by persons with visual impairment. In many of the libraries and institutions providing information services for person with visual

impairment, information materials in alternative format are generally inadequate; digital talking books and the internet are almost unavailable. The consequence is low utilization levels for virtually all the alternative formats, despite increased demand for the use of these formats. This study therefore investigates availability and use of information materials by persons with visual impairment in south western, Nigeria.

## Research Questions

The under listed research questions were raised to guide the study.

1. What are the information materials available for persons with visual impairment in the selected libraries?
2. What is the level of use of alternative format by persons with visual impairment in the selected libraries?

## Hypothesis

The hypothesis formulated was tested at 0.05 level of significance:

There is no significant relationship between information materials availability and its use by persons with visual impairment in the selected libraries

## Literature Review

The principle underpinning library and information services provision to persons with visual impairment should be that of availability and equality of access to information materials. According to the Chartered institute of library and information professionals CILIP (2005), this can be achieved by integrating the service requirements of visually impaired persons into mainstream services, wherever possible and that library services, whatever the type must identify needs, develop policies, identify material resources and plan information services in such a way that persons with visual impairment have access to the same range of information materials as everyone else.

The greatest limitation to information materials availability and indeed provision to blind is the lack of training and appropriate skills to fully develop the service and respond to the dynamics of the information age (IFLA, 2002). This, IFLA says is evident not only in established library services, where trained professionals have no concept of special needs of print handicapped people, or in blindness or other organizations where staff may have no understanding of library services or familiarity with developing collections. The royal national institute for the blind RNIB (2002) in a report revealed that there is a need for more and more books in braille, audio and large prints to be made available to persons with visual impairment. The report further highlighted the discrimination suffered by people with sight problems in buying and borrowing books. Many studies have justified this report, they include Davies, wisdom and Creaser (2001), Bruce and baker (2001), Moore (2000), Martin, Melter and Elliot (1998) among others.

In order to make information materials available to the visual impaired in Nigeria, providers of information materials to persons with visual impairment should consider the option of resource sharing and information exchange to help their client by accessing sources outside their facilities or organizations (Ajobiewe and Fatokun 2000; Basharu, 2002). A study on national strategies for library service for the blind in Denmark (Vitzansky, 1996) found that borrowers at the Danish National Library service for the blind are extremely happy with the service but not as happy with availability of information materials. An earlier study (Vitzansky, 1994) had revealed that there is an urgent need for social and cultural information materials, decentralization of services, equality of access, interpretation and co-ordination of services. Owino (1995) discovered that information materials availability in Kenya was hampered by unpleasant attitudes exhibited by librarians which created barriers between users to the information sought. Owino (1991) and Ng'angá (2003) established that availability and access to reading materials in alternative formats in Kenya is poor.

Schols (1995) asserts that the availability of large print materials for the use of persons with visual impairment in the Netherlands is aimed at the future to be able to provide every source of information; whether this concerns an article, a brochure, a manual or books in large print. The majority of libraries for the blind in Israel, according to Cohen (2000) provide their readers with information about books in two ways, namely; in braille and printed catalogues through this strategy. Updating is impossible; users therefore will not receive information about books which are available to them.

In a report of the situation in Thailand, Pansida (1991) reported that most textbooks in braille and other formats are produced for primary and secondary schools according to the curriculum of the Ministry of Education. Textbooks for university level are available only in subjects requested by users. Talking books are made available in cassettes by volunteers; it includes academic, fiction and non-fiction items. Library services are also delivered through telephone as well as mail services (Cheunwattana, 1991).

An international perspective on the strategies employed in making available information materials for the visually impaired according to Craddock (1996) showed that library involvement in the availability and provision of talking newspapers and magazines varies considerably among countries. In the USA, the National Library service of the Library of Congress spearheads the provision of library and information services to the blind and visually impaired. These services are backed by legislation. The same applies in Sweden where public library authorities are themselves providing local talking newspapers. In Denmark, government grants have encouraged public library authorities to establish talking newspaper services which have been made available by many public libraries since the 1970s. Public libraries in Northern Ireland provide tape copying and distribution services for voluntary newspaper groups. Gateshead public library in the North of England, Craddock reveals is unique in publishing a daily talking newspaper compiled and written by the library.

For persons with visual impairment, technology, in recent times has impacted positively on the availability and use of alternative formats. In an effort to make

catalogues and information files of public and academic libraries accessible to people with visual handicap, Schols (1995) revealed that the National Library for the blind in Netherlands introduced a project called "TOUCAT". Workstations equipped with reading aids such as braille reading line, a speech synthesizer and a letter magnifier were installed to enable the visually impaired to consult the various information files without help. The workstations then enable an online application for transcription into a suitable reading form.

In Israel, the 'Telebook' was implemented which uses modern communication technology allowing visually impaired users ready access to the library catalogue through the telephone. Materials can be quickly located; users can additionally receive summaries and other details including names of narrators. Catalogues can be updated daily and ordering is done instantly (Cohen, 2000). The introduction of 'Data Technology' in Norway was used in producing books for the blind and visually impaired. In Data technology, text prints are put in data readable form as data text. The text is usually retrieved directly from publishers or printing houses and used as a basis for printing braille books. This technology is used by many authors, publishers and printing houses.

Information materials will become useful to persons with visual impairment when they are transcribed into alternative formats. According to the American Council for the Blind (2005) the blind and visually impaired in the United States have been exposed to alternative formats through its affiliated organisations and through a programme of constant distribution of reading materials in alternative formats. Some of these organisations sell the materials, while some lend them to their visually impaired users. A study on the use of alternative formats by Canadian college students with print disabilities (Anne 2000) revealed that 56% of the students use tape recording frequently, 31% use large prints and 19% use braille frequently. Taped books were the most popular for students. There has always been a small but important demand for braille by borrower or buyers from other agencies (National Library of Canada, 1996).

Bruce, McKennell and Walker (1991) reported that 48% blind and partially sighted adults in the United Kingdom (UK) read or use ordinary print materials (with aid though), 24% use large prints, 1% use personal reader, 13% use tape recording and 1% use braille. Bruce et al, adds that the actual use of alternative format was likely to be limited by availability. A U.K. library and information statistics survey (Davis, Wisdom and Greaser, 2001) found that 83% of adults who are blind and partially sighted use tape recordings. Other evidence researches confirm that tape is now a popular reading format, they include Crofts, Cleary, Keil, Franklin and Cole-Hamilton, (2001); Grundy, Alburg, Ali, Breeze and Sloggett, (1999); and Kennell, Yu and Greaser, (2000), 25% of blind and 4% of partially sighted people have Royal National Institute for the blind's talking book player, although awareness of the service is fairly low. 47% of blind and 51% of partially sighted people are not aware of talking book service; only 13% are aware that libraries can inform them about talking books (RNIB, 1997).

Ajobiewe (1999) opined that the provision and use of alternative formats such as braille, large prints, talking books and the availability of reading aids, volunteers and transcription services in libraries servicing persons with visual impairment in

Nigeria will go a long way in making information accessible to blind and partially sighted users. Ogba (2000) reported that visually impaired users of the Imo State library board visit the library section for the visually handicapped to use and borrow braille books, moon type, talking books on cassette, large prints periodicals and books. Ogba (2000) further clarified that apart from the moon type with few volumes existing in the library, there are numerous volumes of braille and periodicals on various subjects which provide satisfaction for the visually impaired users. Large print books are in fewer subject areas while there are many recorded cassettes. In the words of Basharu (2000), it is amazing to note the number of blind persons who come to the Anglo-Nigerian Welfare Association for the Blind (ANWAB) Library, Lagos either to read or to borrow alternative formats for use in their spare time. An estimate of about 95% of the users, he adds, always require reading materials, as they either borrow from the library or they bring printed matter to be transcribed to braille for their reading pleasure.

Talking books are the major reading format of most persons with visual impairment and 80% of the respondents of a study sponsored by the RNIB in United Kingdom visit the Library (RNIB Library) mainly to use and then borrow talking books (Chartres, 1998). In Israel, the major reading format for the blind is also talking books (Annichiavico, 1994). In Sweden and Denmark, Johansen (1994) revealed that national daily newspapers recordings are transmitted using radio waves direct to special tape recorders in the recipients' home. This is done overnight and as a result, the talking version is available in the household of the visually impaired user even earlier than the printed version. In the United States, Radio reading services are used extensively for a wide range of newspapers and magazines (Massis, 1990).

The use of recorded materials on tape by persons with visual impairment is widespread. This, Hatlen (1996) reasoned is because individuals who lost their vision through the ageing process may never master Braille and they will, in all probability, enjoy their remaining years listening to talking books. Children with complex disability are confined to learning by listening. Their physical disabilities may preclude their ability to write. According to Tuttle (1996) it is important however to be flexible and not take rigid stand in arriving at the best format for the blind and visually impaired. Tuttle submits that many persons, who learn braille as adults, use audio formats for some reading tasks and braille for others. Of all the services on offer to the blind persons in Ireland, the talking book service is the most used by the greatest number of people on a continuous basis (Friedlander, 1987).

In an assessment of the use of large prints in the Netherlands Schols (1995) viewed that the partially sighted people who prefer reading their information in large prints are considerable in number. He argued that high number lending and use of large prints can be attributed to the ageing population which has resulted in a rise in the number of elderly people and concomitantly in the frailties associated with old age, such as poor vision. A study (Porter, 1977) declared that 75% of people with partial sight are able to read clear, large print materials effectively.

## Methodology

The study adopts a survey research design. The southwestern geopolitical one of Nigeria was purposively chosen for the study. The population of study is 563 person with visual impairment (the blind and partially sighted) who are users of information materials in alternative formats in fourteen (14) selected libraries. These libraries were selected based on the population of their visually impaired user provided with information materials in alternative formats. The population and other useful information were determined through a preliminary study.

Using a stratified proportionate random sampling technique, the libraries were stratified into (2) NGO libraries, four (4) public libraries, two (2) tertiary institutions libraries and six (6) secondary school libraries. Using a structured questionnaire ( $\alpha = 0.73$ ) and an observation schedule, relevant information on the availability and use of information materials in alternative formats were elicited from study participants. Observations with regards to the availability and use of the alternative formats was also made by the researcher.

With the assistance of the librarians in charge of the selected libraries, the questionnaire was administered directly to the respondents. They were need to their hearing and responses were directly effected on the instrument by the researcher and his trained assistants. From the 563 copies of questionnaire administered, 401 (71.3%) were successfully done and used for the study. The study employed frequency counts and percentages, mean and standard deviation, pearson product moment correlation for analysis.

## Results

Data gathered showed that male were 256 (67.1%) while females were 136 (33%), 104 (26%) were students in secondary school while 297 (74%) were adults who were out of school. Most of the respondents were single 303 (75.5%) while 98 (24.4%) were married. The data also revealed that 224 (54.3%) of the respondents were totally blind while 177 (45.7%) were partially sighted.

### Research Question 1

What are the information materials available for person with visual impairment in the selected libraries?

The study sought from the respondents, the extent of availability of information materials in alternative formats which include Braille, talking book or recorded materials and large prints. It was found that Braille materials are not readily available in the libraries surveyed according to 267 (69.9%) of the respondents; 11 (3.1%) of the respondents thought that Braille books are not available while 92 (21.4%) of the respondents said that Braille are available in the libraries. For talking book or recorded materials, the study revealed that 176 (43.8%) and 159 (39.6%) of the respondents said that talking books were not readily available and not available respectively in the libraries covered by the study. In effect, about (83.4%) of the librarians surveyed are of the view that talking books are either not readily available or not available. The data for large prints shows that large print

materials are not available in the institutions selected for the study representing 318 (79.3%) while 65 (16.2%) said large prints are not readily available. These results have shown clearly that majority of information materials for persons with visual impairment in the libraries surveyed are either not readily available or not available. (See table 1)

From the observations made regarding the availability of information materials in the libraries, it was discovered that the libraries surveyed had little to show as large print materials; Braille materials are the most available of the alternative formats. Most of the Braille materials were literature text, there were a few textbook materials. Talking books available were mainly cassettes; there were little or no digital talking books. In all, the two NGO libraries were much better placed in terms of available materials in Braille, Talking book and Large prints though the available materials were grossly inadequate in numbers and in variety. Generally, the observations showed that information materials available in the libraries are inadequate to meet the demands of persons with visual impairment.

**Table 1**  
**Information materials availability in the selected libraries**

Information Materials	Readily Available		Available		Not readily Available		Not Available		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Braille Materials	9 2	2 1	3 1	5 .	2 6 7	6 9 .	1 1	3 .	4 0 1	1 0 0
Talking book/ recorded materials	1 1	2 .	5 5	1 3	1 7 6	4 3 .	1 5 9	3 9 .	4 0 1	1 0 0
Large prints	5	1 .	1 3	3 .	6 5	1 6 .	3 1 8	7 9 .	4 0 1	1 0 0

Sources: field work 2007

## Research question 2

What is the level of use of alternative format by person with visual impairment in the selected libraries?

The data gathered on the above showed that use of braille was high ( $\bar{x} = 441$ ,  $SD = 1.21$ ) among the study participants. Lower mean scores were recorded for



talking book/audio-recordings ( $\bar{x} = 2.57$ ;  $SD = 1.62$ ) and large prints ( $\bar{x} = 1.33$ ;  $SD = 1.00$ ). This result reveal that respondents in the study use talking book/audio recording at lower level than braille while large print were the least utilized.

Observations revealed that utilisation of Braille materials in the secondary schools and NGO libraries were encouraging. The same cannot be said about public libraries and the tertiary institutions. Braille is the most utilized format because it is the most available in all the libraries. The public, school and tertiary institutions libraries had little to show in terms of talking books, hence utilisation was rather low. Utilisation of talking books in the NGO libraries was noteworthy. Large prints were rarely used in all the libraries.

### Level of use of information materials

Alternative formate	$\bar{x}$	Std
Braille	4.41	1.21
Talking book/audio recordings	2.57	1.62
Large prints	1.33	1.00
No of respondents =	401	

### Hypothesis

There is no significant relationship between information materials availability and its use by persons with visual impairment in the selected libraries

To test this hypothesis, information materials availability was correlated with alternative format utilization by persons with visual impairment in the selected libraries in order to predict the relationship between information materials availability and alternative format utilization in the libraries. The findings showed a Pearson Correlation Coefficient  $r = .224$  ( $P < 0.01$ ) calculated, which revealed a significant relationship between information materials availability and alternative formats utilization. So the hypothesis which states that information materials availability will not have significant relationship with alternative formats utilization is therefore rejected. In effect, the availability of information materials in the selected libraries had a positive relationship with alternative format utilization by persons with visual impairment.

### Correlation between Information materials availability and its use in the selected libraries.

	N	X	Std	R	Sig.	Rmks
Information material availability	4 0 1	5.56	1.70			
				0.224	0.00	Sig
Utilization of information materials	4 0 1	9.19	1.86			

Correlation is significant at 0.01 level  
Decision: significant

## Discussion

The result on the availability of information materials for persons with visual impairment in the libraries indicate that materials such as Braille, talking books or tape recordings and large prints are generally not available in adequate quantities that should encourage the user to read as desired. This is not only common in developing countries as Atinmo (2000) and Ng'anga (2003) have corroborated, but also in many developed countries as reported by Vitzansky (1996) and Bruce and Baker (2001). In terms of variety, the materials are also limited. Indeed, there is acute shortage of information materials in braille, talking books and large prints in Nigeria, while the users have consistently shown strong desire for information materials in readable format.

Braille materials form the bulk of materials available in the libraries surveyed. Talking books are few while large prints were practically non-existent in many of the libraries. Many of the respondents (the partially sighted) complained that they hardly came across large print materials for use. In summary, information materials available in the libraries selected for this study are inadequate to meet the reading interest and information needs of the visually impaired users.

As observed from the result, the most frequently used alternative format among Persons with visual impairment in the libraries was braille, followed by talking books or tape recordings and large prints. This contrasted with the work of Anne (2000) who reported that 19% of Canadian college students used Braille frequently and also Davis, Wisdom and Greaser (2001) who reported that 83% of blind adults and partially sighted persons used tape recording in the United Kingdom (U.K). The preference for talking books in these countries may be due to ease of use and technology which makes it easier to produce and use talking books, (even in digital format) and prevalence of audio based innovative service such as the Talking Newspaper services in the UK.

Studies emanating from the developed countries such as National library of Canada (1996) and Bruce, McKennel and walker (1991) revealed that there is small demand for Braille by borrowers and buyers and that talking books are more frequently used than Braille and large print. Thereason for Braille being the most utilized format in this study could be because alternative formats use is limited by availability. Users have spoken against the time it takes to record a book on tape and that only the relevant part of materials should be recorded. (Parkin & Aldrich, 1987).

It is instructive at this juncture to stress that Nigeria can learn from other countries such as Isreal, Netherland, United States and others who have developed national initiatives and strategies aimed at putting more and more information materials in alternative format at the disposal of the visually impaired. Technology based strategies will be crucial in widening access to information materials for Nigeria's visually impaired persons. This has been successfully done in many countries.

## Conclusion and Recommendation

This study has shown that Braille materials and talking books/audio recordings were either not readily available or not available in the libraries while large prints were clearly not available. Braille remained the most utilized because it is the most available. Availability of information materials in the libraries had positive relationship with its utilisation. This study has made it clear that information materials for persons with visual impairment are not adequate in the libraries and this cannot ensure appreciable utilization levels and a sustained information service delivery on the face of high demand for alternative formats.

The study recommends that increased transcription of information materials into alternative format should be done in order to improve upon the number of information materials in the libraries. They should also balance their collection by increasing talking books and large prints collections considerably as well as braille. The libraries should also collaborate and share resources to increase utilization of information materials.

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