September 2021

Information needs versus Information services: Assessing predictors of Secondary School Students with Visual Impairment Satisfaction at School Library Media Centres in South-Eastern Nigeria

Samuel K. Ibenne
Abia State University, Uturu, Nigeria, samuelibenne@gmail.com

Oluwole Olumide Durodolu
woledurodolu@gmail.com

Information needs versus Information services: Assessing predictors of Secondary School Students with Visual Impairment Satisfaction at School Library Media Centres in South-Eastern Nigeria

By

Samuel Kelechukwu Ibenne

Department of Library and Information Science, Abia State University, Uturu, Abia State, Nigeria

samuelibenne@gmail.com, samuel.ibenne@abiastateuniversity.edu.ng

and

Oluwole O. Durodolu

Department of Information Science, University of South Africa, Pretoria, South Africa, and

University of Lagos, Akoka, Lagos, Nigeria

woledurodolu@gmail.com

Abstract

This study investigated the information needs versus Information services by assessing predictors of Secondary School Students with Visual Impairment Satisfaction at School Library Media Centres in South-Eastern Nigeria. This research embraced a positivist research paradigm in which quantitative research method was used to gather statistical data and generalizing it across various groups of respondents in order to elucidate a certain phenomenon.The population of the study is 95 consisting of 84 students with visual impairment enrolled in the secondary schools selected for the study and 11 SLMC personnel who are responsible for services to the students with visual impairment.The study revealed the following: (i) that the major information needs of the students with visual impairment focused on information needed to pass examinations and information to complete class assignments; (ii) the deficiency of majority of the library services for students with visual impairment in the SLMCs was confirmed; (iii) the opinion of students' and personnel on the paucity of library services tallies; (iv) media-formats were indicated as either not readily available or not available; (v) there is no high level accessibility to school library resources; (vi) it

was proven that a relative influence of information needs and accessibility exist in the library on user- satisfaction of the students with visual impairment; (vii) library services and media-format did not have significant influence on user-satisfaction; (viii) that user-satisfaction, information needs, library services, accessibility and media-format are positively related to library use among the students with visual impairment. Recommendations was made concerning issues and challenges on provision of special rescue votes for acquisition and internal production of media-formats in their school library media resource centres.

Keywords:visual impairment, SLMC services, information needs, media formats availability, accessibility, user-satisfaction.

Introduction and background to the study

Visual impairment is considered as a physical challenge that presents a severe degree of limitation and threats of dependence due to the *personal, interpersonal and environmental barriers* it poses to information seeking for those affected (Otyola, Kibanja and Mugagga, 2017)as a consequence their impaired vision or complete loss of sight. Persons with visual impairment cannot use regular size print materials for purposes of reading, and are unable to perform the task or activity of reading standard print materials for information gathering (Alabdulkader and Leat, 2010).

Beverly, Bath and Barber (2011) highlighted the different causes of visual impairment to include glaucoma, cataracts and detached retina. Similar causes of visual impairment were articulated as: central field loss (CFL), where the central retina is damaged by macular degeneration; diabetic retinopathy and other diseases which are also responsible for CFL; damage of the natural retinal locus of high resolution vision (the fovea); and, diseases like central scotoma, uncorrected refractive errors, trachoma, and corneal opacities (Saha, Bhowmick and Sinha 2009; The World Health Organization, 2012). Ezepue (1997) considers the prevalence and causes of blindness to vary from place to place depending on such variables as time and season, culture, socio-economic conditions, climate and other diverse environmental and genetic conditions. Abdull et.al (2009) revealed that in Nigeria, a significant proportion of visual impairments in different areas of the country (84%), were caused by trachoma, glaucoma and cataract.

The difficulty visual impairment presents in movement around unfamiliar environments necessitates the need for human assistance or use of assistive devices to enable persons with visual

impairment reach desired locations or objects. Also the limitation in sight-aided perception of information, makes the use of alternative media compulsory for obtaining information and engaging in other forms of communication other than oral.Alkhanifer and Ludi (2015) suggest that people receive majority of useful everyday information through sight than any other means. This factor makes persons with visual impairment liable to suffer reduced mobility, diminished opportunities, difficulties in executing tasks associated with daily living, and a general sense of isolation. Perhaps, these threats associated with visual impairment prompted Adeoye (1996) to label the challenge as a destabilising physical and emotional condition with grave socio-economic implications. In the same vein, Gordon *et al.* (2012) believe that it has wide-ranging negative effects on health with equally extensive implications in terms of the individual's participation in society, employment, personal income and quality of life.

The World Health Organisation (2012) estimates that in 2010, the number of people with visual impairment globally was 285 million, 39 million blind and 246 million having low vision; 65% of people with visual impairment and 82% of all blind are 50 years and older. People living with vision loss have received various shades of negative treatment from society. In the case of total loss of sight (blindness) which is absolute such treatments include; isolation, labelling, neglect-induced-stress, disadvantage in the acquisition of normal experiences (like schooling), loss of earning power, dependent status, loss of physical integrity, loss of confidence in the remaining senses (sense doubting), and loss of self-esteem. Kishore(1999) opines that persons with visual impairment, have a wide range of abilities such as ability to read large print, move about familiar environments without any mobility equipment in most situations, or sometimes they may be able to perceive light and darkness faintly.

The World Health Organisation (2012) recognizes three levels of visual capacity as normal vision, low vision and blindness. Low vision and blindness (as impaired vision) may result from three medical conditions including reduced visual acuity, constrained field of vision and imperfect colour vision. With the exception of colour vision cases, most of the visually impaired cases have been observed to emanate mainly from visual acuity-related problems, which range from normal vision to blindness (Iroegbu, 2006).

The relevance and strength of societies and organisations is reflected in the manner in which the weak and vulnerable are treated. Since it is part of the fundamental responsibility of any nation to

educate her citizenry and make life transforming information available to them, the citizens with special need should not be left behind, as doing this is tantamount to violation of their fundamental human rights. It is vital for the visually impaired citizens to acquire useful education for self-actualization and for them to be active participants within the fabrics of the society's activities and development.

Providingefficient information services for this special group,as noted by Majinge and Stilwell (2013), hasposedand remained an uphill task for librariesin meeting theirinformation needs.This difficulty runs against the grain of Mugwisi, Jiyane, & Fombad (2018) view that libraries are meant to be democratic centres of learning that work tirelessly towards meeting the information needs of every user through the delivery of organised information resources and services. The role of libraries within educational institutions was highlighted by Austenfeld (2009) who states that libraries serve to support the curriculum and to promote effectiveness in the teaching and learning process.Austenfeld's position was supported by Morris (2020) who avers that the teaching and learning goals in secondary schools are specifically anchored on the availability of information services and resources provided timely by the school library media centre (SLMC). The SLMC, as noted by Scott and Owings(2004), plays an important role in making information available to students and in teaching students how to obtain and use that information. This role contributes significantly in building the student's capacity for independent learning in the view of Hunter (2010).

The school library media centre is an open learning environment that iscommitted to serving the information needs of every student and staff within the institution in a thoughtful, well-adjusted and impartial manner. Consequently, Rayini, (2017) notes that SLMCs that serve the information needs of students with visual impairment in secondary schools require a level of preparedness on planning, resource adequacy and service delivery in order to ensure effectiveness.This owes to the fact that visual impairment is a physical condition that requires that special care and attentionto be taken by the library on resource and service provision to meet the information needs of persons with the condition. Omenyo (2016) notes in this regard that the provision of the right type of library service, media formats and the promotion of accessibility for students with visual impairment is considered imperative to adequately meet their information needs by their school library media centres.

Providing equitable levels of availability and access to library services, media-formats, and locations of interest within the library is considered to be significant to meeting the information needs of students with visual impairment in school libraries. Reports in literature suggest that students with visual impairment have long suffered exclusion in the provisions made in their school library media centres for meeting users' information needs through service and structural designs that do not factor in their peculiarities (Schmetzke, 2001; Friend, 2009; and Atinmo, 2012). Students with visual impairment need to have access to all services, resources and locations in the library that will contribute in meeting their information needs like their counterparts with sight to ensure their satisfaction with the SLMC.

User-satisfaction is a fundamental factorin the provision of information services in all category of libraries, and is a factor based on the experiences garnered by the user in the process of library use. Tiemo and Ateboh (2016)consider a library's efficiency and productivityas the ability to satisfy the needs and aspirations of the users, where satisfaction implies providing needed information and services that meet the information needs of the user. Those positive experiences of users resulting from encounters with using library services were labelled delight features by Brophy (2006). Libraries have to ensure that users' experience maximum degree of delight features in their services to ensure increased user satisfaction and regular library use among their patrons.

Similarly, regularity in library use is deemed a reflection of the effectiveness of the library in delivering services to the users, and a consequence of user-satisfaction, which connotes acceptance and approval of the library service, when it meets the users' expectations. User-satisfaction is generally viewed as user-fulfilment, and is a condition of mind that arises out of a library user's concurrence with what was received as matched with what was expected from the library (Verma and Lalrokhawma, 2018) Students with visual impairment require specially structured approach, towards meeting their information needs adequately in school library media centres, to create conditions for attaining user-satisfaction. Opie (2018) observes that any deficiency in making such provisions may lead to disinclination of the students' towards continued use of the deficient library services. This may lead to an apathy to library use where a section of the society is isolated in the process of personal and social development.

The impact of a deficient school library media centre for visually impaired secondary school students, who are still in the formative stages of their lives, on academic development, self-

actualization and integration with society could be severe (Aramide,Lawal and Odunlade, 2018). Alemna and Dodoo (2003) suggest that libraries that offer services to this group should know how they are educated and the necessary materials they need in order to positively influence the frequency and effectiveness of library use and user satisfaction among them.

Statement of the problem

Whereas the importance of the library in providing information resources for self-development, self-actualisation, positive adaptation and life-long learning to all categories of individuals is globally encouraged, the role of School Library Media Resource Centres in particular in Nigeria in meeting the needs of students with visual impairment, remain oblique to date, owing to a dearth of empirical evidence. The few existing literature such as Atinmo(2000);Maduagwu(2006);Adetoro (2012); Aramide, K. A; Lawal, W. O. &Odunlade, R.O. (2018), paint a picture of indifference, describing provisions in SLMCs as shabby, rudimentary, and uncoordinated, without standards and a guiding policy. Accessibility and media formats provision was depicted as grossly inequitable thereby raising doubts as to the preparedness of School Library Media Centres in Nigeria to adequately cater for the information needs of this group in order to guarantee user-satisfaction always. There is a concern that with this scenario, a discontent shown by these students over the neglect of their information needs might find possible expression through apathy and reluctance in library use owing to lack of satisfaction. The frustration which these students possibly suffer and the potential loss in human intellectual capacity development arising from their developing a negative attitude, portends the danger of inhibiting their self-development, academic success, information need satisfaction, goal attainment and uninhibited integration into the society. To date, there is a dearth of scholarly research on this phenomenon for South-Eastern Nigeria in particular, prompting this study on the the predictors of user satisfaction among students with visual impairment in school library media centres in South-Eastern Nigeria, aimed at contributing in filling this perceived gap in knowledge.

Research Questions

The following research questions were posed for the purpose of achieving the objectives of this study:

1. What are the information needs of the students with visual impairment in secondary schools in South Eastern Nigeria?

2. What are the library services and media-formats provided for the students with visual impairment in the school library media resource centres?

3. How accessible are library services and media formats to the students with visual impairment in the schools?

4. What is the purpose of school media resource centres use among the secondary school students with visual impairment?

Hypotheses

The following null hypotheses were tested in this study at 0.05 level of significance:

Ho1 Information needs, library services, media-format availability and accessibility, have no significant joint influence on use of the school library among the secondary school students with visual impairment

Ho2 Information needs, library services, media-formats availability and accessibility, have no significant joint influence on user-satisfaction of the secondary school students with visual impairment.

Methodology

The study adopts the descriptive survey method of the ex-post facto type. The survey research involves the process of conducting a study of specific groups or populations (Fawole, 2006). It critically examines events, opinions, objects, attitudes, subjects or ideas with the aim of providing accurate information about the phenomena being studied. Adeyemo (2006) posits that the survey method is appropriate in a study of human populations where the participants are geographically spread or numerous to necessitate drawing a sample to represent the entire population. In this study, the population is spread across four states in South-Eastern Nigeria. The main instrument used in collecting data for this study consisted of two self-constructed sets of questionnaire designated as questionnaires A and B. Questionnaire A prepared in Braille, tagged 'Students With Visual Impairment Questionnaire' (SWVIQ), was used to elicit responses from the secondary school students with visual impairment, while questionnaire B, tagged 'School Library Media

Centre Personnel Questionnaire' (SLMCPQ), was used to elicit responses from the personnel in charge of sections for students with visual impairment in the SLMCs.

Population of the Study

The population of the study is 95 consisting of 84 students with visual impairment enrolled in the secondary schools selected for the study and 11 SLMC personnel who are responsible for services to the students with visual impairment.

In all, eleven secondary schools were purposively selected for the study after a field survey by researcher revealed that they were the institutions with populations of students with visual impairment and with library service for them. Queen of the Rosary College Onitsha Anambra State, which has populations of visually impaired students was not included in the study because the Principal confirmed that the school does not provide any form of library services for them. It was also discovered that the students with visual impairment at Holy Ghost College Owerri Imo State as at the time of the first field survey had graduated from the school as at the period of the re-conducted survey and data collection, necessitating the exclusion of the school.

The study population obtained through a re-conducted survey by the researcher is presented in Table 1, together with the source of the population data.

Table 1: List of selected institutions, population of students with visual impairment and source of population data

S/no	**Institutions**	**Population**	**Source of data**
1	College of the Immaculate Conception Enugu, Enugu State	5	Vice Principal Academic
2	Girls Secondary School, Ngwo, Enugu State	7	Vice Principal
3	Queens College, Enugu, Enugu State	5	Principal
4	Federal Government College, Enugu, Enugu State	4	Principal
5	Special Education Centre for the Blind, Afaraukwu-Umuahia, Abia State	29	Principal
6	Government College Umuahia, Abia State	7	Vice Principal Academic

7	Christ the King College, Onitsha, Anambra State	5	Principal
8	Dennis Memorial Grammar School (DMGS) Onitsha, Anambra State	6	Principal
9	Holy Rosary College Umuahia, Abia State	5	Principal
10	Mbaise Boys Secondary School, Mbaise, Imo State	7	Principal
11	Orlu Girls Secondary School (Morning Star), Orlu, Imo State	4	Vice Principal

N = 84

Research Question 1: What are the information needs of the students with visual impairment in secondary schools in South Eastern Nigeria?

Table 2: Information needs of the Students with Visual Impairment

Information Needs	**Frequency**	**Percentage**	**Mean**	**Std. Dev.**
Passing of examinations	49	90.7	0.91	0.293
Educational opportunities	48	88.9	0.89	0.317
Coping with the visual impairment condition	39	72.2	0.72	0.452
Information for completion of class assignments	37	68.5	0.69	0.469
Health information	37	68.5	0.69	0.469
Library use	34	63.0	0.63	0.487
Current ICT trends	34	63.0	0.63	0.487
Career choices and vocation	25	46.3	0.46	0.503
Current affairs and politics	22	40.7	0.41	0.496
Information on Conferences	9	16.7	0.17	0.376
Travel information/tourism	9	6.7	0.17	0.376
Sports and recreation information	3	5.6	0.06	0.231
Information on subjects of interest	2	3.7	0.04	0.191
Fiction books/other relaxation literature	-	-	0.00	0.000

Table 2 shows the information needs of the secondary school students with visual impairment. It reveals that the major information needs of the students include, information needed to pass examinations ($\bar{x}$=0.91, SD = 0.293), information on educational opportunities ($\bar{x}$ = 0.89, SD=0.317), information on coping with visual impairment ($\bar{x}$ = 0.72, SD = 0.452), information on completion of assignments ($\bar{x}$ = 0.69, SD = 0.469) and health information ($\bar{x}$ = 0.69, SD = 0.469). Other information needs prominent among majority of the visually-impaired students are information on library use ($\bar{x}$ = 0.63, SD = 0.487), and information on current ICT trends ($\bar{x}$ =

0.63, SD = 0.487). The conclusion to be drawn from the above information is that the information needs of the visually-impaired persons are basically in the areas of educational information, health information and information on coping with their visual impairment.

Research question 2: What are the library services and media-formats provided for the students with visual impairment in the school library media resource centres?

Table3: Responseof the Studentswith Visual Impairment on Availability of SLMC services

Service	**Available**	**Not Available**	**Mean**	**Std. Dev.**
Reading service for short materials	42 (77.8%)	12 (22.2%)	0.78	0.420
Designated staff for services to students with visual impairment	42 (77.8%)	12 (22.2%)	0.78	0.420
Volunteers who help to record books on tape	39 (72.2%)	15 (27.8%)	0.72	0.452
Computers equipped with screen reading and synthetic speech	36 (66.7%)	18 (33.3%)	0.67	0.476
Trained staff who are able to communicate understandably	33 (61.1%)	21 (38.9%)	0.61	0.492
Scheduled consultations with the designated staff	26 (48.1%)	28 (51.9%)	0.48	0.504
Material delivery by mail	8 (14.8%)	46 (85.2%)	0.15	0.359
Guided tours for familiarization with the library	8 (14.8%)	46 (85.2%)	0.15	0.359
Braille production/transcription service	7 (13.0%)	47 (87.0%)	0.14	0.339
Information booklets in alternative media formats	4 (7.4%)	50 (92.6%)	0.07	0.264
Recording studio service	-	54 (100.0%)	0.00	0.000
An organized queue system in all library service points	-	54 (100.0%)	0.00	0.000

The result as shown in Table 3 revealed that majority of the students attested to the provision of reading service 42 (77.88), designated staff service 42(77.8%), volunteers' service 39(72.2%), computers, screen reading and synthetic speech service 36(66.7%) and interpretation and translation service 33(61.1%) in their libraries. It can, therefore, be inferred that circulation service, reference service and screen reading service on computers are library services commonly provided for in the school libraries studied.

Research question 3: How accessible are library services and media formats to the students with visual impairment?

Table 4: Responseof the Studentswith Visual Impairment on Accessibility

Statement	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean	SD
The circulation desk is very easy to reach	5 (9.3%)	38 (70.4%)	9 (16.7%)	2 (3.7%)	2.81	0.585
The entrance stairs are easily accessible	2 (3.7%)	41 (75.9%)	11 (20.4%)	-	2.81	0.585
I have access to library staff whenever I need their help	4 (7.4%)	39 (72.2%)	11 (20.4%)	-	2.81	0.545
My right to borrow library materials is guaranteed	8 (14.8%)	25 (46.3%)	14 (26.0%)	-	2.57	0.860
The library has smooth non-slip surfaces that makes me confident I will not fall	1 (1.9%)	31 (57.4%)	17 (31.5%)	5 (9.3%)	2.56	0.744
There are path sounders to warn me of protrusions, walls to guide me movement around	2 (3.7%)	30 (55.6%)	16 (29.6%)	6 (11.1%)	2.54	0.770
The library has embossed/brailed signs which can be read by touch	2 (3.7%)	21 (38.9%)	29 (53.7%)	2 (3.7%)	2.44	0.664
I have unrestricted access to information resources/media formats	-	28 (51.9%)	21 (38.9%)	5 (9.3%)	2.43	0.662
It is easy to find my way around the library	3 (5.6%)	37 (68.5%)	4 (7.4%)		2.35	1.320
I am familiar with the arrangements of fittings and furniture in the library	3 (5.6%)	25 (46.3%)	13 (24.1%)	13 (24.1%)	2.33	0.991
Average Weighted Mean					**2.57**	

Students' responses on accessibility in the school library media centre in Table 4 revealed that majority of the respondents disagreed with many of the statements that support high level of library service and media format accessibility. For instance, majority of the respondents attested to the lack of ease of accessing the circulation desk 43(79.7%), lack of ease of accessing the entrance stairs 43 (79.7%), lack of access to library staff whenever they need help 43(79.7%) and lack of ease of finding their way around the library 40(74.1%). Moreover, majority of the respondents agreed with the fact that there was lack of guaranteed borrowing privileges within 33(61.1%), lack of path sounders to guide their movement around the library 32(59.3%), lack of smooth non-slip

surfaces to prevent fall 32(59.3%), lack of unrestricted access to information resources media-format 28(51.9%), and lack of familiarity with the furniture and fittings in the library 28 (51.9%). Overall, the average weighted mean of library accessibility was 2.57 which was less than the expected mean of 2.69. This implies that there was a low level of library service accessibility for the students with visual impairment in the selected schools.

Table 5 presents the responses of the SLMC personnel on the accessibility of their school library media centres for the students with visual impairment.

Table 4: Response of SLMC personnel on Accessibility of theSLMC services

Options	**UOA**	**TIA**	**GSA**	**RA**	**Mean**	**SD**
Reading service for short print materials	1 (20.0%)	-	1 (20.0%)	-	2.00	2.000
Scheduled/personalized consultations with patrons	1 (20.0%)	1 (20.0%)	-	1 (20.0%)	1.60	1.887
Transcription service	1 (20.0%)	-	1 (20.0%)	1 (20.0%)	1.40	1.673
Guided tours/familiarization for patrons	1 (20.0%)	-	1 (20.0%)	1 (20.0%)	1.40	1.673
Volunteers who record materials on tape, CD, DVD	1 (20.0%)	-	1 (20.0%)	1 (20.0%)	1.40	1.673
Reference/SDI service	1 (20.0%)	-	1 (20.0%)	1 (20.0%)	1.40	1.673
Material delivery service (positing, e-mail, fax etc.)	1 (20.0%)	-	-	2 (40.0%)	1.20	1.643
Computer use/Internet/e-mail service	-	1 (20.0%)	1 (20.0%)	2 (40.0%)	1.00	1.225
Guidance and counselling service	2 (40.0%)	-	-	1 (20.0%)	0.80	2.049
Media room/recording studio service	-	-	1 (20.0%)	1 (20.0%)	0.60	0.890
Inter-library loan service	-	-	1 (20.0%)	1 (20.0%)	0.60	0.894
Braille production service	-	-	1 (20.0%)	1 (20.0%)	0.60	0.899
Current awareness service	-	-	1 (20.0%)	1 (20.0%)	0.60	0.694
Bindery service	-	-	-	2 (40.0%)	0.40	1.546
Indexing and abstracting service	-	-	-	2 (40.0%)	0.40	0.548
Serial service	-	-	-	2 (40.0%)	0.40	0.548
Reserve collections service	2 (40.0%)	-	1 (20.0%)	-	0.00	2.000

Average Weighted Mean					**1.11**	

Key: **UOA** = Unrestricted Open Access; **TIA** = Timed individual Access; **GSA** = Group Scheduled Access; **RA** = Restricted Access

Table 5 shows that the SLMC personnel attested to more of the controlled access options than unrestricted open access to library services for the students with visual impairment in their schools.The responses of the SLMC personnelon media format accessibility for students with visual impairment is presented in table 5.

Table 6: Response of SLMC personnel on mode of media formats accessibility to the students with visual impairment

Media Format Accessibility	**UOA**	**TIA**	**GSA**	**RA**	**Mean**	**SD**
Braille Books	4 (80.0%)	1 (20.0%)	-	-	3.80	0.447
Large Print Books/Serials	2 (40.0%)	1 (20.0%)	-	-	2.20	2.049
Braille-in-Print	3 (60.0%)	1 (20.0%)	1 (20.0%)	1 (20.0%)	1.60	1.807
Talking Books (Books on tape CD, DVD)	-	1 (20.0%)	1 (20.0%)	-	1.00	1.414
Talking Magazines/Journals/Newspapers	-	1 (20.0%)	1 (20.0%)	1 (20.0%)	1.00	1.414
Live educational Radio/TV programmes	-	1 (20.0%)	-	1 (20.0%)	0.80	1.304
Tactile Picture Books	-		-	1 (20.0%)	0.80	1.304
DAISY Reading Software/Materials	-	1 (20.0%)	-	1 (20.0%)	0.80	1.304
Recorded educational Radio/TV programmes	-	1 (20.0%)	-	-	0.60	1.342
Average Weighted Mean			**-**		**1.40**	

Key: **UOA** = Unrestricted Open Access; **TIA** = Timed individual Access; **GSA** = Group Scheduled Access; **RA** = Restricted Access

Table 6 presents information on media format accessibility and it showed that majority of the SLMC Personnel affirmed that the students had access to braille books (5 or 100.0%), braille-in-print (5 or 100.0%), and large print books/serials (3 or 80.0%). Thus, braille books, braille-in-print and large print books/serials are found to be media format accessible to the visually impaired persons in the selected schools. Also, the results revealed that the average weighted mean of media

format accessibility which is 1.40 is greater than the expected mean, thus establishing media format accessibility by the visually impaired persons in the selected schools.

Research question 4: What is the purpose of school media resource centres use among the secondary school students with visual impairment?

Table 7: Purpose for whichthe students use the SLMC

Purpose of Library Use	Frequency/ Percentage	Mean	SD
Using of talking books	21 (38.9%)	1.10	0.000
Reading of educational braille materials	39 (72.2%)	1.00	0.000
To read for examinations	34 (63.0%)	0.63	0.487
To complete my class assignments	37 (68.5%)	0.63	0.487
To relax with friends	26 (48.1%)	0.48	0.504
Reading of fiction/relaxation literature	11 (20.4%)	0.20	0.407
To use Internet chat/social networks	4 (7.4%)	0.07	0.264
To search databases	3 (5.6%)	0.06	0.231
To escape boredom	6 (11.1%)	0.06	0.231
To browse the Internet	-	0.00	0.000
To use e-mail service	-	0.00	0.000

The major purpose of use of the SLMC by the students with visual impairment as revealed by Table 7include: reading of educational braille materials 39(72.2%), to complete class assignments 37(68.5%), reading for examinations 34 (63.0%) and using of talking books. This implies that the students with visual impairment used their school library media centres mainly for educational purposes.

Hypotheses Testing

The two null hypotheses were tested at 0.05 level of significance.

H_{01}: Information needs, library services, media format availability and accessibility, have no significant joint influence on use of the school library among secondary school students with visual impairment in South-Eastern Nigeria

The test of significant joint influence of information needs, library services, media format availability and accessibility, on library use among the students with visual impairment is presented in Table 8.

Table 8:Test of Significant Joint Influence of Information needs, Library Services, Media Format Availability and Accessibility, on Library Use

Model	Sum of squares	Df	Mean square	F	Sig

Due to regression	108.290	4	27.072	20.701	.000
Due to residual	64.081	49	1.308		
Total	172.370	53			

R = .793, R^2 = .628, Adj R^2= .598, SEE = 1.144

Table 8 shows that the joint influence of the independent variables (i.e. information needs, library services, accessibility and media formats availability) on the dependent variable (library use) is significant. ($F_{(4,49)}$ = 20.70, $p < 0.05$). This implies that the joint influence of information needs, library service provision, library service accessibility and media formats availability on library use by the visually impaired students is significant. Therefore, the null hypothesis is rejected. Furthermore, information needs, library services, accessibility and media format availability was found to have jointly accounted for 62.8% of the total variance in library use (R^2 = 0.628).

H_{02}: Information needs, library services, media-formats availability and accessibility have no significant joint influence on user-satisfaction of students with visual impairment

Table 9 presents the test of significant joint influence of information needs, library services, and media formats availability and accessibility on user-satisfaction of the secondary school students with visual impairment

Table 9: Test of significant joint influence of Information needs, Library Services, and Media-Formats Availability and Accessibility on user-satisfaction

Model	**Sum of squares**	**Df**	**Mean square**	**F**	**Sig**
Due to regression	52.808	4	13.202	80.586	.000
Due to residual	7.372	49	.164		
Total	60.180	53			

R = .937, R^2 = .877, Adj R^2= .867, SEE = .405

Table 9 presents information on the joint influence of independent variable (information needs, library service provision. library service accessibility and media formats availability) and dependent variable (satisfaction of the students with visual impairment with the library service) and it shows that information needs, library service provision, library service accessibility and media format availability has significant joint influence on visually impaired students satisfaction with library service ($F_{(T(4, 49)}$ = 80.59, $p < 0.05$). Furthermore, information needs, library service

provision, library service accessibility and media format availability were found to have jointly accounted for 87.7% of the total variance in students with visual impairment satisfaction with library service.

Discussion

One of the specific objectives of the research was to identify the information needs of the students with visual impairment. The study reveals that the major information needs of the students with visual impairment concentrated on information needed to pass examinations and information to complete class assignments which were all educational information which is consistent with the finding of Shenton (2007) in a study conducted in the UK where academic needs were foremost on the high school students' options of needs. The students considered meeting their academic needs as the most important mission of their school library. The study conducted by Dent, Goodman and Kevane (2014) in Uganda revealed that secondary school students see the library primarily as a place to support their learning and studying in conformity with the findings of this study.

This study shows that the students considered information on coping with their visual impairment, health information, career choices and vocation and trends on ICT as also significant. This is in conformity with the report of IFLA (1999, 2005); Kassim and Maduagwu, 2006; and Atinmo, 2012) who all agree that students with visual impairment need effective information service in their school libraries as a basis for achieving academic excellence and for managing other aspects of their lives and to achieve integration with society. A study by Arua and Chinaka (2011) on the use of school library resources by secondary school students in Umuahia North Local Government Area, Abia State Nigeria indicates that a vast majority of respondents (70.29%) were of view that the information resources available to them in their school libraries do not satisfy their information needs. The implication of neglecting to carter for the information needs of these students is figuratively speaking, akin to running an apartheid system of information provision, in an era where the democratization of information access opportunities has become the acceptable global practice.

One of the objectives of this study was to determine the library services provided for the students with visual impairment in their school libraries. Data gathered showed availability of reading service for short materials 42 (77.8%), designated staff for services to the students with visual

impairment 42 (77.8%), volunteers who assist to record books on tape 39 (72.2%) and staff that communicate understandably 33 (61.1%). Services that were not available include; material delivery by mail, guided familiarization with the library, braille production/transcription service, recording studio service, and an organized queue system at all service points and the provision of information in alternative media-formats for the sightless.

The result aligns with Harris and Oppenheim (2003) findings from a study on the provision of library services for visually impaired students in UK further education libraries in response to the Special Education Needs and Disability Act (SENDA). In the study, 22 libraries (45.8%) had specific features to assist visually impaired students in physically accessing the library and its collections, while 26 libraries (54.2%) had no such provisions. 33.3% of the libraries provided guides and promotional material in accessible alternative formats and also induction sessions that recognized the needs of visually impaired students while 66.7% did not. Only 27.1% of the libraries considered the design of their library web sites and/or online catalogues as being 'user friendly' and 16.7% only had access to catalogues of materials in specific formats for students with visual impairment, however, a significant improvement existed in the provision of resources to assist the students in accessing information, primarily magnifying glasses or large monitors with 75% compliance in the libraries.

The absence of majority of the library services for students with visual impairment in the SLMCs studied conforms to Ajogwu (2006) who holds that the disadvantaged in Nigeria have inadequate library services. Oyegade's (2000) argument provides a likely explanation for this flaw as he states that most libraries in Nigeria are grossly underfunded and neglected to be able to play their roles effectively. This situation was discovered as the same in the UK where Harris and Oppenheim (2003) argue that most colleges were not ready to comply with the SENDA as funding system for providing additional learning support was limited. The authors argue that the Government should have offered sufficient resources to ensure that the obligations of SLMCs were met. These outlined inadequacies contrast with the position of Zarkov (1981) in a seminal paper stating that library services constitute an effective means of helping the sightless to resume full existence and overcome their limitations considerably.This ideal has however been blighted by the overarching divisive practices in rendering library services to all categories of users.

The students' opinion on the paucity of library service tallied with those of the SLMC Personnel. For example, on reading service for short materials SLMC personnel showed 2 (40%) and 4 (80%) for availability of volunteers who record materials on tape. The students and the SLMC Personnel differed on the provision of current awareness information in alternative media-formats which had 3 (60%) from the SLMC Personnel. The views of all the respondents indicate a low level of library service delivery for students with visual impairment. This result contrasts with the recommendations of IFLA (2005) on the necessity for the provision of library services to students with visual impairment in secondary schools in order to facilitate their learning like their peers with normal vision.

The data on media-format availability show that majority of the media-formats were indicated as either not readily available or not available. The result shows an agreement between the students and the school librarians on the inadequacy of the media formats and agrees with the findings of Akakandelwa and Munsanje (2012) in a study in Zambia that sought to assess the provision of learning and teaching materials for students with visual impairment in basic and high schools and discovered that 'school libraries and resource centres were typically under-resourced and struggle with limited budgets, facilities and resources to provide comprehensive information services to the school community'. The result is equally consistent with Obajemu (2002) who used the Lagos State Library Board Standards for School libraries, to conduct an assessment of school library service in a Local Government Area of Lagos State Nigeria, and discovered that the stock of the libraries were grossly inadequate.

The literature reflects a gulf of difference with reports from developed countries, Klinkosz, Sekowski and Brambring (2006), Ratna (2007) and Steer and Cheetham (2005) revealing different situations in Poland, India and Australia respectively. In Poland particularly, the success rate in the support of the students with visual impairment with adequate resources was such that enabled 20% of them to progress to higher institutions. It is inconceivable that in an era where most information resources, including those for the visually impaired are going more digital than print-based (Shmetzke, 2001; Albitz, 2002; Keefer, Kakumanu and Boubakis, 2009; Beverly, Bath and Barber, 2011; Hernon and Calvert, 2006; Nielsen and Irvall, 2005 and Davis, 2003), the school libraries in South-Eastern Nigeria are still burdened with insufficient availability of paper-based

braille. In this circumstance, it becomes very doubtful that they can effectively serve the information needs of the students with visual impairment.

Data from this study shows that majority of the respondents disagreed with many of the statements supporting high level accessibility in their school library in contrast with the findings of Hill (2012) in a survey conducted in Central New York State in the U.S. which reports that most school libraries adjust instructional practices and the library space to accommodate the needs of visually impaired patrons. The result from this study corroborates the views of Beverly, Bath and Barber (2011) that information resources are not always accessible to or appropriately packaged for persons with visual impairment in the right format, at the right time, or in sufficient detail. The likely cause of this disharmony in the findings may be traceable to differences in the priorities accorded to the educational development of the visually impaired students in the different environments. This scenario of neglect is capable of eliciting the negative feelings of frustration, leading to possible user-dissatisfaction in school library media resource centres.

Accessibility has been identified as a vital element in the process of information utilization that contributes to successfully meeting the needs of users in libraries (John-Okeke, 2006). As noted by Whitehouse (2011) 'the logistics of making material accessible on any significant scale means that there just is not enough time or money to provide full access in any system where accessibility is not built into the process which generate educational material at source'. One author states that; "what a school thinks about its library is a measure of what it thinks about education" (Baughman, 2000 citing Harold Howe former U.S. Commissioner of Education). Many authors (Gibson, 2006; John-Okeke, 2006; IFLA, 2005; Ajogwu, 2006 and Ekwelem, 2013) have suggested that access granted to persons with visual impairment in many libraries including SLMRCs is poor, inadequate and to a good degree insensitive to their physical challenge indicating that they do not place significant value in adequately meeting the needs of this group of users.

One of the objectives of the study was to ascertain the purpose and frequency of school library use among the students with visual impairment. The data shows that the major purpose for the students' use of the library were on educationally related options like; reading of educational braille materials 39 (72.2%), reading for examinations 34 (63%), to complete class assignments 37 (68.5%) and using of taking books 21 (38.9%). The implication of this result is that the students' use the library for educationally related purposes. This finding agrees with the report of IFLA

(2005), which states that students with visual impairment need the provision of learning resources and environment in school libraries to support their process of their education and recommended its provision as a matter of urgency.

A study conducted in South Western Nigeria by Adetoro (2012) which explored alternative format preferences among secondary school visually impaired students, discovered that their choice of talking books was necessitated by the quest for better understanding and ease of use or playback while Braille use was for improvement in reading, spelling and learning corroborating the findings of this study on the students' purpose of using the school library. The studies of Gilbert, Williams and McLaughlin (1996) and Whittingham, Huffman, Christensen and McAllister (2013) discovered that audio recordings are a viable instructional intervention for struggling readers, while a study on the influence of Electronic books on pupils' reading practices and comprehension (Dungworth and Grimshaw, 2004) discovered no significant difference in the comprehension scores of those reading printed and electronic versions, meaning that there is no disadvantage in using electronic book versions, rather the visually impaired students comprehension of their educational materials will be facilitated by their use of the alternative sources.

On frequency of library use, the data shows a high frequency of use with 32 (59.3%) for those who use it daily and 8 (14.8%) for those who use it twice or thrice in a week. Authors like (Atinmo, 2000 and Maduagwu, 2006) have attributed the use of libraries by persons with visual impairment to their desire to satisfy their information needs, much in the same way that persons with sight satisfy their information needs.

The data established a significant relative influence of information needs and accessibility of the library on user- satisfaction of the students. This result affirms the position of (Tristan, 2003; Chua, 2004 and Smith, 1999) who believe that user-satisfaction consist of a programme that works where staff are not indifferent to users. Nkiko and Ilo's (2006) submission that user-satisfaction is the essence of the rigorous and complex organization of libraries, together with Bassey's (2006) opinion that user-satisfaction is connected to well-stocked libraries which are properly arranged, manned by well-qualified and cultured staff is in line with this finding.

On the other hand, library services and media-format did not have significant influence on user-satisfaction. This finding contrasts with those of Hernon and Altman (2001) and Ugwu (2009) who

were of the view that the expectation of library users is that of competent services, where users want staff to be knowledgeable and assist in locating needed materials and information quickly and efficiently, which will then contribute to user-satisfaction.

Data from the study shows that user-satisfaction, information needs, library services, accessibility and media-format are positively related to library use among the students with visual impairment. The findings are both in contrast and agreement with the findings of Dwivedi, Kapoor, Williams and Williams (2013) who studied factors affecting system use and user satisfaction in RFID-enabled libraries and discovered that factors like system quality, use and user satisfaction positively influenced users attitudes towards the library services.

In this study, Media-format availability, which is regarded in the literature as contributing to system quality, exhibited a weak positive relationship with library use, in contrast with the findings of Dwivedi, Kapoor, Williams and Williams (2013) reported above and the report of a study conducted in Denmark by Martensen and Gronholdt (2003) on improving library users' perceived quality, satisfaction and loyalty which indicated that library collections play a positive role in determining user satisfaction. The report of Iweha (2003) that the UK vision services which facilitated the availability of resources for persons with visual impairment in the United Kingdom encouraged a rise in library use among them equally contrasts with this finding. The possible cause of this difference is that the students' reported high rate use of their school libraries could only be a measure of their personal resolve for educational success through striving to solve their educational and other information needs irrespective of the inadequacy of media formats in their school libraries or being satisfied with the state of media format availability.

Implications of the Findings

The result of this study has implications for the improvement of services rendered to the visually impaired students in the inclusive education school library media resource centres in South-Eastern Nigeria. Specifically:

1) Adequately catering for the educational information needs discovered to be uppermost for the students with visual impairment, needs that increased consideration be given to the internal production process and/or acquisition of recommended educational materials in

alternative media formats by the school library media resource centres to ensure equitable service.

2) The finding that other information needs were poorly catered for requires specific action in service orientation and personnel readiness as correction strategies in order to sustain an already high interest in library use.
3) The finding that most of the specific services needed by the students with visual impairment in their school library media resource centres were not provided requires a re-appraisal of services in the libraries and ensuring that equitable considerations are provided in planning future libraries for inclusive schools.
4) The findings from the study revealed inadequacy in media format provision in the school library media resource centres which needs to be addressed with specific policy initiatives and actions in media format acquisition and/or production to correct the imbalance.
5) Accessibility was discovered as having influence on user satisfaction in the study with the implication that considerations in structural redesigns and other forms of improvement on resource access could lead to greater user satisfaction and should be given consideration.

Conclusion

The user-satisfaction of the students with visual impairment will be increased by meeting their information needs through correcting the anomalies of unavailability of media-formats, contents of media-formats, out-dated media-formats, and unavailability of equipment for media-format use and lack of recording studio for producing and use of voice related media-formats. It is justifiable to believe that such an improvement will be of tremendous help to the students in achieving success in education, health, career/vocation choices, managing their handicapping condition, and an overall integration into society through erasing the feelings of exclusion. Added to the foregoing is increasing the students' access to the media-formats and locations within their SLMCs and addressing the inadequacies identified in library services. This will contribute to increasing user-satisfaction and sustain and/or improve the high frequency of library use. It is already evident that despite the inadequacies of their school library media resource centres as indicated in the findings of the study, that the students still used the libraries frequently, an indication that improvements to the libraries in their services, media-formats availability and accessibility, will yield immediate results in improving user-satisfaction.

Recommendations

The following recommendations are given in line with the findings of this study:

1. Secondary schools providing mainstream education in South-Eastern Nigeria should provide special rescue votes for acquisition and internal production of media-formats in their school library media resource centres for the students with visual impairment. This will enable them correct the present inadequacies revealed by the study.

2. The schools should prioritise the employment of qualified librarians versed with the knowledge of providing special library service. This will contribute towards improving services to these students in their school library media resource centres and also facilitate the internal production of needed educational texts.

3. The schools should seek ways to partner with interested local and international NGOs and other donor agencies to improve on their media-formats availability and facilitate improvements to service delivery.

4. The computerization programmes of state governments in South-Eastern Nigeria for secondary schools should have special provisions for the types of hardware needed by the students with visual impairment.

References

Adetoro, N. (2012). Alternative format preferences among secondary school visually impaired students in Nigeria. *Journal of Librarianship and Information Science*. 44.2: 90-96.

Adetoro, N. and Atinmo, M. I. (2012). Reading interest and alternative format utilization by persons with visual impairment in Nigeria. *African Journal of Library, Archives and Information Science*. 22.2:75-88.

Adeyemo, D. A. (2006). Types of research. *Research methods in education*. Eds. G.O. Alegbeleye, I. Mabawonku & M. Fabunmi. Ibadan: The Faculty of Education, University of Ibadan.1-27.

Ajogwu, M. N. (2006). The role of non-governmental organizations (NGO'S) in providing library and information services to two disadvantaged groups in Nigeria. *Global review of library and information science*. 2.78-89.

Ajogwu, M. N. (2006). The role of non-governmental organizations (NGO'S) in providing library and information services to two disadvantaged groups in Nigeria. *Global review of library and information science*. 2.78-89.

Akakandelwa, A. and Munsanje, J. (2012). Provision of learning and teaching materias for pupils with visual impairment: results from a National survey of Zambia. *British Journal of Visual Impairment*. 30.42:49

Albitz, R. S. (2002). Electronic resource librarians in academic libraries: a position announcement analysis, 1996-2001. *Libraries and the academy*.2.4:589-600.

Alkhanifer A, and Ludi S. (2015). Disorientation Factors that Affect the Situation Awareness of the Visually Impaired Individuals in Unfamiliar Indoor Environments. In: Antona M., Stephanidis C. (eds) Universal Access in Human-Computer Interaction. Access to the Human Environment and Culture. UAHCI 2015. Lecture Notes in Computer Science, vol 9178. Springer, Cham. https://doi.org/10.1007/978-3-319-20687-5_9

Aramide, K. A; Lawal, W. O. Odunlade, R.O. (2018). Information Needs and Library Services Delivery for Students with Visual Impairment in Oyo State, Nigeria. International Association of School Librarianship. IASL Conference Proceedings 2018.

Arua, U. and Chinaka, G. I. (2011). Use of library resources by staff and students of secondary schools in Umuahia North Local Government Area of Abia State. *Library Philosophy and Practice (e-journal)*. Retrieved March 31, 2014 from http://www.digitalcommons.unl.edu/libphilprac/540

Beverly, A. C., Bath, A. P., and Barber, R. (2011). Health and social care information for visually-impaired people. *Aslib Proceedings: New Information Perspectives*. 63.2/3:256-274. Accessed 8th August 2020 from www.emeraldinsight.com/0001-253X.htm

Chua, J. (2004). A study of user satisfaction in libraries. Retrieved July 30, 2020 from http://www.Consal.org.sg/webupload/resources/brie/attach wants/%7B62EFE21

Davis, J. J. (2003). The accessibility divide: The visually impaired and access to online news. *Journal of Broadcasting and Electronic Media*.47.3:474-481.

Dent, V. F. Goodman, G. and Kevane, M. (2014). Rural community libraries in Africa: challenges and impacts. Hershey, PA: IGI Global.

Dungworth, N. and Grimshaw, S. (2004). Electronic books: children's reading practices and comprehension. *School Libraries in View*. 19: 22-27

Dwivedi, Y. K. Kapoor, K. K. Williams, M. D. and Williams, J. (2013). RFID systems in libraries: an empirical examination of factors affecting system use and user satisfaction. *International Journal of Information Management.* 33: 367-377

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.* Retrieved November 26, 2019 from http://www.digitalcommons.unl.edu/libphilprac/970

Gibson, A. (2006). Disability support services, Victoria University of Wellington. *Improving the quality of library services for students with disabilities.* Eds. P. Hernon and P. Calvert. Westport, CT: Libraries Unlimited. 57-66.

Gilbert, L. M. Williams, R. L. and McLaughlin, T. F. (1996). Use of assisted reading to increase correct reading rates and decrease error rates of students with learning disabilities. *Journal of Applied Behaviour Analysis*. 29.2: 255-257

Hernon, P. and Altman, E. (2001). Delivering satisfaction and service quality: a customer based approach for libraries. Chicago: American Library Association.

Hernon, P. and Calvert, P. (2006). Improving the quality of library services for students with disabilities. Westport, Connecticut: Libraries Unlimited.

International Federation of Library Associations and Institutions (IFLA). (2005). Libraries for the Blind in the Information Age: Guidelines for development. *IFLA Professional Reports*. 86

Irvall, B. and Nielsen, G. S. (2005). Access to libraries for persons with disabilities checklist. *IFLA professional reports* no. 89.Retrieved January 20, 2020 from http://www.ifla.org/IV/ifla?programme.htm

Iweha, C. C. (2003). Networking library Services for the visually impaired in South Western Nigeria. *Journal of Association of Libraries for the Visually Impaired.* 2(1): 8-17.

John-Okeke, R. (2006). Interface model for information utilization in research institutions. *Lagos Journal of Library and Information Science.* 3.2:147-152

Kakai, M., Ikoja-Odongo, R. and Kigongo-Bukenya, I.M.N. (2004). A study of the Information seeking behavior of undergraduate students of Makerere University, Uganda. *World libraries*. 14.1. Retrieved January 20, 2020 from http://www.worlib.org/vol14no1/index

Kalia, A., Legge, E. G., Roy, R. and Ogale, A. (2001). Assessment of indoor route-finding for people who are visually impaired. *Journal of visual impairment and blindness.*135-147

Kassim, O. O. and Maduagwu, D. K. (2006). *The impact of Library on the reading needs of the visually impaired*. Titus Adelowo, Noah Osatuyi, and Theo Ajobiewe Eds. Special Education in Nigeria: A search for New Direction (A book of reading in honour of Dr T. C. Obani) Oyo; school of Special Education, FCE Oyo.

Keefer, R., Kakumanu, P. and Bourbakis, N. (2009). A wearable document reader for the visually impaired: Dewarping and segmentation. *International Journal on Artificial Intelligence tools*. 18.3:467-486

Maduagwu, D. K. and Ojewande, K. A. (2006). Library and information services for people with special needs. *The special Educator* 5.1: 81-85.

Martensen, A. and Gronholdt, L. (2003). Improving library users' perceived quality, satisfaction and loyalty: an integrated measurement and management system. *The Journal of Academic Librarianship*. 29.3: 140-147

Nkiko, C. and Ilo P. I. (2006). User's satisfaction in academic libraries: issues and strategies for intervention. *Global Review of Library and Information Science*. 9.2:10-20

Nnadozie, C. O. (2006). Information needs and information seeking behavior of visually handicapped persons in Owerri, Nigeria. *The Research Librarian: Journal of the Nigerian Library Association Abia State*. 1.1: 116-131.

Obajemu, A. S. (2002). Assessment of school library service in a Local Government Area, Lagos State, Nigeria: a case study. *African Journal of Library, Archives and Information Science.* 12.1: 59-67

Obajemu, A. S. (2002). Assessment of school library service in a Local Government Area, Lagos State, Nigeria: a case study. *African Journal of Library, Archives and Information Science.* 12.1: 59-67

Ochoggia, R. E. (2003). Persons with Disabilities Bill 2002: Implications concerning visual disabilities for academic library and information services in Kenya. *New library world*. 104.7/8:307-312.

Otyola, W.R., Kibanja, G.M. and Mugagga, A.M. (2017). Challenges Faced by Visually Impaired Students at Makerere and Kyambogo Universities. Makerere *Journal of Higher Education.* 9 (1), 75 – 86 DOI: http://dx.doi.org/10.4314/majohe.v9i1.6

Oyedun, G. U. (2006). Assessment of physical facilities and Readers' satisfaction: a case study of Federal University of Technology Minna library. *Borno Library, Archival and Information Science Journal.* 5.1.

Oyegade, E. A. (2003). Inter library cooperation in providing services for the visually impaired. *Journal of Association of Libraries for the Visually Impaired* 2.1: 18-24.

Oyegade, E. A. 2003. Inter library cooperation in providing services for the visually impaired. *Journal of Association of Libraries for the Visually Impaired* 2.1: 18-24.

Ratna, B. (2007). Development oriented library services for the visually challenged in West Bengal, India. Paper presented at the World Library and Information Congress: 73rd IFLA General Conference and Council 19-23 August.

Rowland, W. (2008). Library Services for Blind People: an African perspective. *IFLA Journal*. 34.1:84-89. Retrieved December 20, 2019 from http://ifl.sagepub.com/content/34/1/84

Schmetzke, A. (2001). Digitization of library information and its accessibility for people with disabilities. *Encyclopaedia of information science and technology vol. 2*. Hershey: Idea Group Reference.

Shenton, A. K. (2007). Attitudes to books and school libraries among teenagers in an English High School. *New Review of Children's Literature and Librarianship.* 13.1: 31-57.

Tristan, L. (2003). Usability 101; Satisfaction. Retrieved January 30, 2020 from http://www.tnl.net/blog/entry/usability 101: satisfaction.

Ugwu F. C. (2009). Users' satisfaction with the resources and services of Federal College of Freshwater fisheries Technology and Federal College of Wildlife Management Libraries, New Bussa, Nigeria. Unpublished MLIS Dissertation, University of Ibadan.

Whitehouse, B. G. (2011). Access to books for the visually impaired: minimising charity and maximising choice. Unpublished doctoral thesis, Department of Information Science, Loughborough University, United Kingdom p.208

Whittingham, J. Huffman, S. Christensen, R. and McAllister, T. (2013). Use of Audiobooks in a school library and positive effects of struggling Readers' participation in a library-sponsored Audiobook Club. *School Library Research, Journal of the American Association of School Librarians.* 16. Retrieved March 31, 2020 from <http://www.ala.org/aasl/slr/volume16/whittingham-huffman-christensen- mcallister>

World Health Organization. (2012). Global Data on visual impairments 2010. WHO/NMH/PBD/12.01. Retrieved November 29, 2019 from http://www.who.int

Zarkov, D. S. (1981). Libraries for the blind in the Russian Soviet Socialist Republic. *Unesco Journal of Information Science, Librarianship and archives Administration*.