



<https://www.tspeducator.com>

Volume 24; Issue 2; October 2025; Page No. 108-115.

## Availability and use of Library Resources by the Visually Impaired Students in Selected Tertiary Institutions in Niger Delta Region, Nigeria

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### Abstract

The study investigated availability and use of library resources by visually impaired students in selected tertiary institutions in Niger Delta Region, Nigeria. The study adopted descriptive research design. The study was guided by four objectives, four research questions and four hypotheses. The population of the study comprised all available educational library resource and learning materials in selected tertiary institutions. Students with visual impairment in selected tertiary institutions in the Niger Delta Region namely; Rivers State University, (RSU), Ignatius Ajuru University of Education (IAUE), University of Port Harcourt and Niger Delta University in Bayelsa state. Purposive sampling technique was used to select 30 respondents for the study. The instrument for data collection was a structured questionnaire, titled: Availability and Use of Library Resource among Visually Impaired Users Questionnaire. Frequency count, tables and percentages were used to address the research questions. Hypotheses were tested using t-test and Analysis of Variance (ANOVA) to determine the level of significance at 0.05 alpha level. Results revealed that there is no significant influence of the availability of braille on user satisfaction is rejected. There is no significant influence of the availability of speech recognition on user satisfaction is rejected and the alternative accepted. There is no significant influence of the availability of audiobooks on user satisfaction is rejected and the alternative accepted and there is no significant influence of the availability of screen readers on user satisfaction is rejected, and the alternative accepted. Based on the findings, some recommendations were made. It was recommended amongst others that Library administrators and the government in the Niger Delta region should endeavour to embrace the use of modern technologies such as Braille, Audiobooks, Speech recognition software, Screen readers and other visual learning facilities to meet the teaching of their students. Library administrators in the Niger Delta region needs to explore adopting Braille in cataloguing an item, also they should provide textbooks in braille form in various discipline. Special library patrons should be employed to guide the visually impaired when seeking for information and also proper power supply and good internet connection and the librarian should also create awareness to the visual impaired users so they can make use of the library.

**Keywords:** Library, Resources, Visually Impaired, Tertiary Institutions, Niger Delta

### Introduction

Traditionally, the library is a systematic collection of books used for reading, study or a room in which such a collection is kept. According to Appiah (2019), a library is a collection of resources in a variety of formats that is organised by information professionals or other experts who provide convenient physical, digital, bibliographic,

or intellectual access and offer targeted services and programs with the mission of educating, informing, or entertaining a variety of audiences and the goal of stimulating individual learning and advancing society as a whole. The library service is that which brings the staff in contact with users to deliver the right information at the right time and to help them in finding out resources and providing required information. Libraries offer various kinds of services such as Circulation Operation, Reference Service, Information Service, Bibliographic Service, Abstracting Service, Indexing Service, Current Awareness Service (CAS), and Selective Dissemination of Information (SDI): Reprographic Services, Translation Service, and Online Services. In the different services/departments of the library, several materials are used to satisfy the users. Obviously, the main source of information in a library, as it has been for many years, is books. Most libraries will contain hundreds, if not thousands of books for members to read and borrow for a number of days. The books will range in category, from fiction to nonfiction and will be filed in different sections according to sub category.

Chioma and Japheth (2016) stressed that the provision of library resources and information services to visually impaired young people in any country especially pupils in the elementary and colleges is very essential to every educational society. As well as books, libraries will also house many other types of reading material. Most libraries will have a selection of daily newspapers delivered for use on the premises. Some of the larger libraries will have some papers from other countries and a few will be able to order publications which they don't have in stock if you request it. There is usually also a section where magazines, journals and other publications are kept. Again, they will usually be more popular titles and should you request something a little more unusual, you may have to ask for them to stock it in future. Information accessibility has been recognized as a fundamental human right regardless of ethnicity, religion, and physical conditions Naveed (2020). It enables a user to retrieve information needed without any hindrance. As such, disabled people also possess an equal right to have access to the required information as zero reject, cannot be denied access to library resources. Out of ten children, one is a disabled child, and only 28% of disabled people have disability benefits globally, and one percent in low-income countries Ngozi et al. (2019). The UNO's 10th sustainable development goal is about reducing inequalities to ensure no one is left behind.

In general, disabled people face inequality issues and discrimination from all walks of life, including the library facilities. There are several schools, centres, and colleges engaging in providing education facilities to people with disabilities, including the visually impaired. These people also get admission to different programs at higher education institutions in Nigeria. When they study with normal students, they are not provided enough facilities for access to information as much as a normal student or person in our country. In addition, there is a lack of awareness among library staff about their responsibility of providing equal access to people with disabilities. Even disabled people are often unaware of their fundamental right to information access Awais and Ameen (2015). It remains in the core responsibilities of library staff to provide access to information for the disabled community. Advances in technology mean that most libraries will not just have a selection of books, magazines and other reading material. Nearly all libraries now will have access to the Internet and it is usually free to use for members. Some will also have a selection of films and TV programs on video or disc. These are often found in libraries used by students or people who will need to reference library film footage. As mentioned before with periodicals and publications, the nature of these films and TV shows will often be heavily influenced by past and regular users and you may have to ask for certain programs to be supplied in the future. The essential logic of making books or resources available to visually impaired students has received far less attention in the literature on librarianship that has discussions of intellectual access. And this has called the attention of several researchers. Making materials available is not enough. Thus, the materials provided must be in good condition to be used.

### Statement of Problem

In special needs education, considerations are focused at ensuring that all sheds of disabilities are rehabilitated and made to leave normal lives and perform normal activities. In pursuant of the child right Act and the zero reject policy, increasing numbers of persons with disability in the society have put pressure on both government and organizations in their efforts to ensure that the impact of every impairment or disabling condition is reduced. There were more cases of visual, hearing, mobility impairments and others. Rehabilitation centers were established in several locations in Rivers State, Nigeria to cater for challenges of orphans and other persons with disability. The effort encompasses the provision of teaching facilities and equipments in these centres in addition to infrastructure. Studies have showed recorded achievements of both rehabilitation and vocational based-rehabilitation and the types of skills acquired through teaching and training of disabled persons. The library ought to be an information haven for all users, but as a researcher, it has been observed that the need of physically impaired students' especially those that are visually impaired are ignored in the provision of resources such as audiobooks, Braille, Speech recognition software, and Screen readers to enhance learning for students with visual impairment. More

considerations are given to hearing, mental, speech and Orthopaedic impairments. The question raised is how far the operators of inclusive education have and special needs education centres been able to consider the provision of learning resources for visual impaired students in their libraries? To answer this question this paper examines the availability and use of library resources to the visually impaired students in selected institutions in the Niger delta, Nigeria.

Objectives of this study were to examine the availability and use of library resources to the visually impaired students in selected institutions in the Niger delta, Nigeria.

### Study Objective

Study objective is to investigate availability and use of library resources to the visually impaired students in selected tertiary institutions in Niger Delta region, Nigeria. General study objectives are:

1. to examine the type of learning library resources for visually impaired students.
2. to determine the adequacy of learning library resources for visually impaired students
3. to identify the influence of learning library resources for visually impaired students
4. to evaluate the challenges to learning library resources for visually impaired students.

### Research Questions

Research questions for the study embraced the following;

- i. What is the extent of type of learning library resources for visually impaired students in selected tertiary institutions in Niger Delta, Nigeria?
- ii. To what extent is the adequacy of learning library resources for visually impaired students in selected tertiary institutions in Niger Delta, Nigeria?
- iii. What is the extent of influence of learning library resources for visually impaired students in selected tertiary institutions in Niger Delta, Nigeria?
- iv. What is the extent of challenges of learning library resources for visually impaired students in selected tertiary institutions in Niger Delta, Nigeria?

### Research Hypotheses

The following hypotheses are stated in the null form and formulated for testing:

- H<sub>01</sub>: There is no significant influence on the type of learning library resources for visually impaired students in selected tertiary institutions in Niger Delta, Nigeria.
- H<sub>02</sub>: There is no significant influence on the adequacy of learning resources for visually impaired students in selected tertiary institution in Niger Delta, Nigeria.
- H<sub>03</sub>: There is no significant influence on the influence of learning library resources for visually impaired students in selected tertiary institutions in Niger Delta, Nigeria.
- H<sub>04</sub>: There is no significant influence on the challengea of learning resources for visually impaired students in selected tertary institution in Niger Delta, Nigeria.

### Methodology

This study adopted descriptive survey research design. The study was conducted in four selected tertiary institutions in the Niger Delta; Niger Delta University (NDU) Wilberforce Island, Bayelsa State, Ignatius Ajuru University of Education, Rumuolumini, University of Port Harcourt and Rivers State University, Nkpolu, Oruworukwo, Rivers State, Nigeria. Among the three Universities, only University of Port Harcourt is a Federal University. The population of the study was 198 respondents. The sample size of the study was 198 drawn using purposive sampling technique. A self-structure questionnaire titled: SFAQ and MSFQ was used for data collection. Also the study made use of a researcher designed structured interview titled: "Availability and Use of Library Resource Among Visually Impaired Users Interview (AULRAVIUI). It consisted of two sections A and B. Section A deals with the respondents' demographical data; Section B contained major interview question. The instruments were validated for face and content validity by two experts, one in special needs education and one in measure and evaluation. The reliability of the instrument was determined using Cronbach Alpha reliability testing method. The instrument yielded a reliability coefficient of 0.82 for SFAQ and 0.76 for MSFQ. However, test-retest reliability method was used to determine the reliability coefficient of 0.86 for AULRAVIUI. The instrument was administered to the respondents with help of two research assistants. Frequency count, tables and percentages were used to answer the research questions. Hypotheses were tested using t-test and Analysis of Variance (ANOVA) to determine the level of significance at 0.05 alpha level.

## Results

**Research Question 1:** What is the influence of the availability of Braille and its use in libraries in the Niger Delta region?

**Table 1: Braille has a positive influence on users' satisfaction**

SN	Braille	SA	A	D	SD	$\bar{x}$	$\pm$	Decision
1	Would you find it easier to use library materials in form of braille?	15(50)	10(33.3)	5(16.7)	0	3.3	2.4	Agreed
2	Does the use of braille affect how often you use the library?	22(73.3)	8(26.7)	0	0	3.7	3.2	Agreed
3	Would you have any challenges making use of the library if braille is not made available?	30(100)	0	0	0	4.0	2.2	Agreed
4	Does the use of braille affect your academic performance in any way?	30(100)	0	0	0	4.0	1.9	Agreed
5	Do you agree to the fact that using braille makes you a better student?	7(23.3)	23(76.7)	0	0	3.2	2.5	Agreed
Grand $\bar{x}$ = 3.7								

The respondents in responding to the influence of braille on library users' satisfaction, agreed to all the items. They were as follows: Would you find it easier to use library materials in form of braille? (3.3), Does the use of braille affect how often you use the library? (3.7), Would you have any challenges making use of the library if braille is not made available? (4.0), does the use of braille affect your academic performance in any way? (4.0), Do you agree to the fact that using braille makes you a better student? (3.2). The finding revealed that braille had a positive influence on users' satisfaction. This was evident in the grand mean score (3.7).

**Research Question 2:** What is the influence of the availability of speech recognition software and its use in libraries in the Niger Delta region?

**Table 2: Speech recognition software has a positive influence on users' satisfaction.**

SN	Speech Recognition	SA	A	D	SD	$\bar{x}$	$\pm$	Decision
6	Do you get easy access to your devices through speech recognition	30(100)	0	0	0	4.0	1.8	Agreed
7	Would it be convenient for you to search for materials in the library using speech recognition software?	14(46.7)	8(26.7)	8(26.7)	0	3.2	2.4	Agreed
8	Will the use of speech recognition software affect your academic performance in any positive way?	15(50)	10(33.3)	5(16.7)	0	3.3	2.8	Agreed
9	Does the use of speech recognition have a positive outcome in how you make query?	2(6.7)	4(13.3)	24(80)	0	2.3	1.3	Disagreed
10	Does making use of speech recognition software affect how you navigate the library?	30(100)	0	0	0	4.0	3.2	Agreed
Grand $\bar{x}$ = 3.4								

The respondents in responding to the influence of speech recognition on users' satisfaction. The respondent agreed with the following items: Do you get easy access to your devices through speech recognition? (4.0), Would it be convenient for you to search for materials in the library using speech recognition software? (3.2), Will the use of speech recognition software affect your academic performance in any positive way? (3.3), and Does making use of speech recognition software affect how you navigate the library (4.0). While, item number 9 was disagreed with as follows: Does the use of speech recognition have a positive outcome on how you make query? (2.3). From the responses, the availability of speech recognition has a positive influence on its user satisfaction, as shown with the obtained grand mean (3.4).

**Research Question 3:** What is the influence of the availability of Audio books and their use in libraries in the Niger Delta region?

**Table 3: Audio-books has a positive influence on users' satisfaction.**

SN	Audio Books	SA	A	D	SD	$\bar{x}$	$\pm$	Decision
11	Does the use of audiobooks give you a better understanding of what an information material is talking about?	12(40)	15(50)	3(10)	0	3.3	5.1	Agreed
12	Do you visit the library because of the provision of audiobooks?	0	3(10)	0	27(90)	1.2	3.7	Disagreed
13	Does the use of audiobooks affect your academic performance?	5(16.7)	25(83.3)	0	0	3.2	3.3	Agreed
14	Does the library make provision for audiobooks related to your field?	0	0	0	30(100)	1.0	2.8	Disagreed
15	Do you consider audiobook a useful tool in the library	30(100)	0	0	0	4.0	1.5	Agreed
Grand $\bar{x}$ = 2.5								

The respondents in responding to the influence of audiobooks on user satisfaction agreed with 3 items including: Does the use of audiobooks give you a better understanding of what an information material is talking about? (3.3), Does the use of audiobooks affect your academic performance? (3.2), Do you consider audiobooks a useful tool in the library? (4.0). While 2 items were disagreed with as follows: Do you visit the library because of the provision of audiobooks? (1.2), Does the library make provision for audiobooks related to your field? (1.0). The grand mean was obtained as 2.5 indicating that the availability of audiobooks positively influences user satisfaction.

**Research Question 4:** What is the influence of the availability of screen readers and their use in libraries in the Niger Delta region?

**Table 4: Screen readers have a positive influence on users' satisfaction**

SN	Screen Readers	SA	A	D	SD	$\bar{x}$	$\pm$	Decision
14	Does the screen reader feature make it easier for you to browse the internet?	30(100)	0	0	0	4.0	1.2	Agreed
15	Does the use of screen readers affect how you search for information in the library?	15(50)	5(16.7)	8(26.7)	2(6.)	3.1	2.0	Agreed
16	Would you consider screen readers a useful tool in the library?	30(100)	0	0	0	4.0	2.9	Agreed
19	Would you have any challenge making use of materials if screen readers are not made available	30(100)	0	0	0	4.0	3.7	Agreed
20	Do you agree using screen readers makes you a better student	23(76.7)	7(23.3)	0	0	3.8	1.4	Agreed
Grand $\bar{x}$ = 3.8								

The respondents in responding to the influence of screen readers on user satisfaction agreed with all the items as follows: Does the screen reader feature make it easier for you to browse the internet? (4.0), Does the use of screen readers affect how you search for information in the library? (3.1), Would you consider screen readers a useful tool in the library? (4.0), Would you have any challenge making use of materials if screen readers are not made available? (4.0) and, Do you agree using screen readers makes you a better student? (3.8). The grand mean was obtained as 3.8 indicating that screen readers have positive influence on user satisfaction.

**Hypothesis 1:** There is no significant influence of the availability of braille on user satisfaction.

**Table 5: Availability of braille and user satisfaction**

SN	Variables	$\bar{x}$	df	Cal. r	Crit. r	Alpha	Decision
1	Braille	35.3	28	0.87	0.361	0.05	Rejected
2	User satisfaction	33.7					

The null hypothesis that there is no significant influence of the availability of braille on user satisfaction was tested. The calculated r of 0.87 was obtained. This shows a high relationship. The calculate r of 0.87, with a degree of freedom of 28 and critical r of 0.361 was statistically significant at 0.05 alpha level (cal.  $r = 0.87 > \text{crit. } r = 0.361$ ,  $\alpha = 0.05$ ). Therefore, the null hypothesis that there is no significant influence of the availability of braille on user satisfaction was rejected.

**Hypothesis 2:** There is no significant influence of the availability of speech recognition on user satisfaction.

**Table 6: Availability of speech recognition and user satisfaction.**

SN	Variables	$\bar{x}$	Df	Cal. r	Crit. r	Alpha	Decision
1	Speech recognition	31.4	28	0.76	0.361	0.05	Rejected
2	User satisfaction	33.7					

The tested hypothesis that there is no significant influence of the availability of speech recognition on user satisfaction shows that the calculated r obtained as 0.76 with a degree of freedom of 28 and critical r of 0.361 was statistically significant at 0.05 alpha level (cal.  $r = 0.76 > \text{crit. } r = 0.361$ ,  $\alpha = 0.05$ ). Consequently, the null hypothesis that there is no significant influence of the availability of speech recognition on user satisfaction was rejected and the alternative accepted.

**Hypothesis 3:** There is no significant influence of the availability of audiobooks on user satisfaction.

**Table 7: Availability of audio-books and user satisfaction.**

SN	Variables	$\bar{x}$	Df	Cal. r	Crit. r	Alpha	Decision
1	Audiobooks	28.9	28	0.54	0.361	0.05	Rejected
2	User satisfaction	33.7					

Table 7 shows that the tested hypothesis that there is no significant influence of the availability of audiobooks on user satisfaction obtained a calculated r of 0.54 with a degree of freedom of 28 and critical r of 0.361 was statistically significant at 0.05 alpha level (cal.  $r = 0.54 > \text{crit. } r = 0.361$ ,  $\alpha = 0.05$ ). Consequently, the null hypothesis that there is no significant influence of the availability of audiobooks on user satisfaction was rejected and the alternative accepted.

**Hypothesis 4:** There is no significant influence of the availability of screen readers on user satisfaction.

**Table 8: Availability of screen readers and user satisfaction**

SN	Variables	$\bar{x}$	Df	Cal. r	Crit. r	Alpha	Decision
1	Screen readers	37.6	28	0.89	0.361	0.05	Rejected
2	User satisfaction	33.7					

The null hypothesis that there is no significant influence of the availability of screen readers on user satisfaction. The calculated r of 0.89 was obtained. This shows a high relationship. The calculate r of 0.89, with a degree of freedom of 28 and critical r of 0.361 was statistically significant at 0.05 alpha level (cal.  $r = 0.89 > \text{crit. } r = 0.361$ ,  $\alpha = 0.05$ ). Therefore, the null hypothesis that there is no significant influence of the availability of screen readers on user satisfaction was rejected, and the alternative accepted.

## Discussion

Research question 1 revealed the influence of braille on library users' satisfaction, agreed to all the items. They are as follows: Would you find it easier to use library materials in form of braille? (3.3), does the use of braille affect how often you use the library? (3.7), would you have any challenges making use of the library if braille is not made available? (4.0), Does the use of braille affect your academic performance in any way? (4.0), do you agree to the fact that using braille makes you a better student? (3.2). The finding reveals that braille has a positive

influence on users' satisfaction. This is evident in the grand mean score (3.7). Hypothesis 1 revealed that there is no significant influence of the availability of braille on user satisfaction was tested. The calculated  $r$  of 0.87 was obtained. This shows a high relationship. The calculate  $r$  of 0.87, with a degree of freedom of 28 and critical  $r$  of 0.361 is statistically significant at 0.05 alpha level (cal.  $r = 0.87 > \text{crit. } r = 0.361, \alpha = 0.05$ ). Therefore, the null hypothesis that there is no significant influence of the availability of braille on user satisfaction is rejected.

Research question 2 revealed speech recognition influence on users' satisfaction. The respondent agreed with the following items: Do you get easy access to your devices through speech recognition? (4.0), Would it be convenient for you to search for materials in the library using speech recognition software? (3.2), Will the use of speech recognition software affect your academic performance in any positive way? (3.3), and Does making use of speech recognition software affect how you navigate the library (4.0). While, item number 9 was disagreed with as follows: Does the use of speech recognition have a positive outcome on how you make query? (2.3). From the responses, the availability of speech recognition has a positive influence on its user satisfaction, as shown with the obtained grand mean (3.4). The tested hypothesis 2 revealed that there is no significant influence of the availability of speech recognition on user satisfaction shows that the calculated  $r$  obtained as 0.76 with a degree of freedom of 28 and critical  $r$  of 0.361 is statistically significant at 0.05 alpha level (cal.  $r = 0.76 > \text{crit. } r = 0.361, \alpha = 0.05$ ). Consequently, the null hypothesis that there is no significant influence of the availability of speech recognition on user satisfaction is rejected and the alternative accepted.

Research question 3 revealed influence of audio-books on user satisfaction agreed with 3 items including: Does the use of audiobooks give you a better understanding of what an information material is talking about? (3.3), Does the use of audiobooks affect your academic performance? (3.2), Do you consider audiobooks a useful tool in the library? (4.0). While 2 items were disagreed with as follows: Do you visit the library because of the provision of audiobooks? (1.2), does the library make provision for audiobooks related to your field? (1.0). The grand mean was obtained as 2.5 indicating that the availability of audiobooks positively influences user satisfaction. Hypothesis 3 revealed that there is no significant influence of the availability of audio-books on user satisfaction obtained a calculated  $r$  of 0.54 with a degree of freedom of 28 and critical  $r$  of 0.361 is statistically significant at 0.05 alpha level (cal.  $r = 0.54 > \text{crit. } r = 0.361, \alpha = 0.05$ ). Consequently, the null hypothesis that there is no significant influence of the availability of audio-books on user satisfaction is rejected and the alternative accepted. Research question 4 revealed the influence of screen readers on user satisfaction agreed with all the items as follows: Does the screen reader feature make it easier for you to browse the internet? (4.0), Does the use of screen readers affect how you search for information in the library? (3.1), would you consider screen readers a useful tool in the library? (4.0), would you have any challenge making use of materials if screen readers are not made available? (4.0) and, do you agree using screen readers makes you a better student? (3.8). The grand mean was obtained as 3.8 indicating that screen readers have positive influence on user satisfaction. Hypothesis 4 revealed that there is no significant influence of the availability of screen readers on user satisfaction the calculated  $r$  of 0.89 was obtained. This shows a high relationship. The calculate  $r$  of 0.89, with a degree of freedom of 28 and critical  $r$  of 0.361 is statistically significant at 0.05 alpha level (cal.  $r = 0.89 > \text{crit. } r = 0.361, \alpha = 0.05$ ). Therefore, the null hypothesis that there is no significant influence of the availability of screen readers on user satisfaction is rejected, and the alternative accepted.

## Conclusion

This study investigated the availability use and of library resources among visually impaired users in the Niger Delta region. The users attest to the fact that there is no resources to aid the visual impaired in using the library and even in the special need education department their E-library is not operational. Through this research, we were able to deduct that availability use and of library resources among visually impaired users in the Niger Delta region does not meet the users' satisfaction and therefore needs to make adjustments and improve in its services by adopting the use of: Braille, audio-books, speech recognition software and screen readers. It was clearly seen that when this is done, the library users had a high level of satisfaction and would in turn make efficient use of the library facilities.

## Recommendations

Based on the findings of this study, the general recommendations are that;

- (1) Library administrators and the government in the Niger Delta region should endeavor to embrace the use of modern technologies such as Braille, Audiobooks, Speech recognition software and Screen readers to meet the satisfaction of their patrons.
- (2) Library administrators in the Niger Delta region needs to explore adopting Braille in cataloguing an item, also they should provide textbooks in braille form in various discipline.

- (3) Special library patrons should be employed to guide the visually impaired when seeking for information and also proper power supply and good internet connection because some of these facilities need constant power and network supply and the visual impaired users may end up being unsatisfied if those facilities are out of use due to break in power supply.
- (4) The librarian should also create awareness to the visual impaired users so they can make use of the library.

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