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Information Literacy Skills Required by Blind and visually Impaired Students for Effective Information Access in the University of Nigeria, Nsukka

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**INFORMATION LITERACY SKILLS REQUIRED BY BLIND AND VISUALLY
IMPAIRED STUDENTS FOR EFFECTIVE INFORMATION ACCESS IN THE
UNIVERSITY OF NIGERIA, NSUKKA**

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Abstract

The work examined the information literacy skills (ILS) of blind and visually impaired students for effective access to information in the University of Nigeria, Nsukka. The study is a case study, guided by four research objectives which include: ILS's possessed by the blind and visually impaired students, Method of acquisition of ILS, challenges encountered in the acquisition of ILS and strategies of enhancing their ILS acquisition. The study is a case study. The instruments for data collection were questionnaire and interview. The population of the study comprised 95 visually impaired students of the UNN. Copies of the questionnaire were administered to all 95 visually impaired students, in the presence of volunteered librarians who assisted them in filling the questionnaire. 90 were returned and used for the analysis. Descriptive statistics of frequency mean was used to analyse the data from questionnaire while data obtained from interview was analysed qualitatively. The result revealed that the visually impaired students possess adequate information literacy skills that will enable them to excel in their academic endeavours, though with some challenges, Recommendation were made based on the challenges. These include Incorporating ILS training in the use of library and study skills course taught by Librarians to students, Provision of regular power supply or generating set with automatic change over, provision of scholarship to the people with disability, designing ILS as a compulsory course to all students in the university curriculum, organizing librarians and management information science (MIS) staff, being stake holders, to teach the course and demonstrate the skills to the students with visual impairment and most importantly, creating a sub section of the university library with state of the art facilities and appropriate furnishing, to assist the blind and visually impaired to acquire the ILS

Introduction

People with visual impairment constitute a sizeable number among students in Institutions of higher learning, in South east Nigeria. The visually impaired and the blind are those who have various degrees of vision loss including those who are severely sight impaired. This group of people have difficulties of sighting information resources for their academic activities. Many universities do not have facilities to assist their blind and visually impaired student. These students are left to fend for themselves with regards to assessing information in this era of information communication. There is need for this category of

people to have access to digitized resources to argument their access to library holdings in their individual interest. Web consortium and the emergence of the web accessibility initiative ([www.w3.org\(WAI\)](http://www.w3.org/WAI)) has provided a set of web content accessibility guidelines to help web innovators come up with effective accessible sites (Schiff, 2009). Studies have shown that digital resources may be hypothetically accessible, yet navigational difficulties may persist for blind and visual impaired users (Brophy and Cravan, 2007). In view of this, distinction should be made between accessibility and usability. Digital information explosion has made it mandatory for information literacy to assume paramount importance for students. Information Literacy is education that creates learning opportunities that enhances student ability to access and use information independently. Information Literacy skill is the acquisition of basic knowledge, tool and techniques of knowing where and how to find information, and be able to participate effectively in research process. This will enable them possess adequate knowledge of the tools, methods, instruments of the new information technologies and the relevant information literacy competences needed to take advantage of these resources. Literacy skills avails the student opportunity of understanding the availability of information, and how and where to find information and how to work with or exploit results of information accessed. Literacy skills create learning opportunities which enhances student's access, evaluation, organization and use of information independently as a fundamental element of learning, scholarship and research. According to SCONUL (1999) information literacy encompasses library user education, and those key skills relating to the use and manipulation of information in the context of learning, teaching and research issues in higher education. Students no longer need to rely on teachers, textbooks and libraries to access the information they need to make decision or complete assignments because they live in a world of immediate communication where they can find answers to so many questions that intrigue them (O' Connell, 2007). The import of these paper is to ascertain ways of instilling in the blind and virtually impaired students information literacy skills and knowledge for critical thinking that would enable them pursue their career and communicate effectively in learning, academic study and research

Statement of problem

The importance of information literacy skills (ILS) is one of the potent skills required by the blind and visual impairment students to succeed in knowing when there is need for information, locating the needed information, sifting the information and ethically using the information in this information technological age has been underscored by many researchers

and organizations. For instance, the European Commission (EC, 2000) in her draft memorandum on lifelong learning noted that ‘learning how to learn, to adapt, to change and to make sense of vast information flows are now generic skills that everyone should acquire’ and that these skills are the key to strengthening Europe’s competitiveness and improving the employability and adaptability of the workforce. This statement highlights the need for blind and virtually impaired student that constitutes a significant number among students in institutions of higher learning in South East to have adequate information literacy skills in order to improve their learning standards, employability and competitiveness in a global economy. Lack of these ILS by blind and visual impaired will compound the problem of isolation and dejectedness that seem to be associated with them in Nigeria. Adequate information literacy skills will enable them perform the key role of learning, scholarship and research. This will help in the creation of an information society which ultimately will lead to national development.

It will appear from the literature that the adequacy or otherwise of the information literacy skills of people with Sensory Impairment to carry out the role of studentship effectively and efficiently has hardly been subjected to as much rigorous research as examining the skills of students without any form of sensory impairment . It seems also that the information literacy skills of student with sensory Impairment in Institutions of higher learning in Nigeria have scarcely been the subject of empirical study. This knowledge gap provided the motivation to carry out this study.

Objectives of the study

The general objective of the study is to determine the information literacy skills of blind and visual impaired students in UNN. The specific objectives are:

1. Determine ILS required by blind and visually impaired students in UNN
2. Find out Methods of acquisition of ILS by the blind and visually impaired students in UNN
3. Identify challenges faced by the blind and visually impaired students in acquisition of ILS in UNN
4. Suggest Strategies for enhancing ILS acquisition by blind and visually impaired students in UNN.

Research Questions

The study was guided by the following research questions

1. What amount of information literacy skills (ILS) do the blind and visually impaired students of UNN possess?
2. What methods do the blind and visually impaired students use to acquire ILS in UNN?
3. What challenges do the blind and visually impaired students of UNN encounter in the acquisition of ILS?
4. What strategies should be adopted to enhance ILS acquisition by the blind and visually impaired students in UNN?

Literature Review:

Various information literacy standards such as ALA, (1989); SCOUNL, (1999); ACRL, (2000) demand that participants who have completed certain levels of education are expected to have a high level of information literacy skills. The ILS required according to Nkiko (2014) include the ability to recognize when information is needed, ability to locate, evaluate and use effectively needed information. Similarly, individuals with higher education levels are expected to have different information literacy skill levels. In support of this view, Brand-Gruwel, Wopereis and Vermetten (2005) classified participants with higher educational levels as experts and those with lower educational levels as novices in examining their experiences in information problem-solving process and they found differences in their skills. He further opined that access without skills is not useful; so the acquisition of information literacy skills becomes a basic need of every citizen. Lenox and Walker as quoted in Okore and Njoku (2012) also explained the concept of Information literacy (ILS) by characterizing the information literate person as one who has the analytical skills to formulate research question and evaluate results. And the skills to search for and access a variety of information types in order to meet his or her information needs. Hence, the need for information literacy skills as a vehicle for academic achievement cannot be underestimated. Information literacy skills therefore, encompasses knowledge of one's information needs and the ability to identify, locate, evaluate, organise and effectively use information to address issues or problems at hand. And this is a prerequisite for participating effectively in the information society. Dike (2009) also added that the ability to access, evaluate and use information from a variety of sources; to analyse, sort and incorporate

relevant items into a knowledge base with critical judgement and thinking is essential if knowledge societies are to be learning societies and if change is constant.

According to Diso (2010), ILS has since become the driving force in the global academic environment. Every academic-based achievement is largely depends on the level of ILS possessed by the individual. Similarly, Brophy and Caven (2007) have explored two programmes of the assistive technologies that are beneficial and should be possessed by the blind and visually impaired students. This programmes acronymed JAWS (Job Access with Speed) and Zoomtext if adequately possessed will enable them navigate the information world. Jaws are a screen reader with voice synthesis while Zoomtext comprise screen magnification software. Both technologies are compatible with Microsoft windows application. JAWS will enable a visually challenged individual to interact with the computer in the same way a sighted persons would. Through this he/she will readily access most catalogs, databases, the gateway to the various library resources, needed for education and research. On the other hand Zoomtext is screen magnification software that intergrates voice sybthesis with enlarged text and graphics. Text can be magnified up to 26 times in flexible steps.

Acquisition of information literacy skills, ICT skills and any other form of skills is done through different methods, but mostly through training, retraining and experience. Any learning activity which is directed towards the acquisition of specific knowledge and skills for the purpose of an occupation or task is referred to as training (Cole, 2002). Through training, skills are taught and learnt. Training is the process through which people learn new skills or techniques, that will transform them from the state of ineffectiveness to being able to do something effectively (Ugwu & Ekere, 2010). Brophy and Craven, (2007), suggested the need to train Blind and visually impaired students on assistive technologies (JAWS and ZOOMTEXT) which include both hardware and software. They insist that once these skills are acquired, it will enable the blind and visually impaired persons to read, print, use a computer, take note and communicate via paper and e-mail. They concluded that with these, the visually challenged can gain access to information from library catalogs, databases and websites and be able to participate effectively and keep up to date in their fields. Similarly Cole (2002) opined that students can be trained via lectures/talk, classroom instruction, programmed instructions, case-study analysis and simulation exercise. On the other hand, Kate Moss (1995) asserts that blind and visually impaired students can learn many things through group instruction with minimal support.

Sadly enough. The blind and visually impaired students are traversed with several challenges which militate against their acquisition of Information Literacy skills. This is because, one of the most serious challenge towards effective acquisition of ILS by the visually and impaired students is the attitudes of the lecturers, staff and students without disability towards them. Other serious problem according to Okore and Njoku (2012) include, lack of constant electricity supply, lack of internet connectivity, poverty, among others .

One of the strategies for enhancing ILS is by integrating information literacy education in the student's curriculum or any review with effective implementation based on advanced and rigorous training. According to Ogunso, Akindojutimi and Omoiniyi (2011), establishment of new information and communication technology into university curriculum will have a great impact on students' performance and achievements. Stakeholders such as librarians and lecturers should be strongly committed to exposing students with disabilities to the philosophy and application of information literacy as an integrated course in institutions of higher learning in Nigeria. When this is administered from the point of entry, it will facilitate teaching and learning process.

Participants in the Information for All Programme (IFAP Report, 2005), identified the following strategies and actions for achieving more information literate societies. They agreed that efforts need to be made to widely promote the concept of IL and that the concept of ILS should be included be in the curriculum at all levels of education: primary, secondary and tertiary levels around the world. It is necessary to implement IL in the professional development of educational experts in the first place and for a model curricula to be developed by IFAP among others. Other strategies suggested by the IFAP include presenting the concept of IL within a specific context for easy understanding (Lau, 2006).

Methodology

The design of the study is case study. The population of the study consisted of 95 visually impaired students of University of Nigeria, Nsukka. (according to the report of the Physically challenged Section of the Nnamdi Azikiwe Library, UNN 2017). There was no sampling. This is because the population is manageable. The instruments used for data collection were questionnaire and interview schedule. Copies of the questionnaire were administered by the researchers through the Section For Physically Challenged in the University library. A total of 95 copies of the questionnire were distributed by the researchers

and 90 were completed and returned. The questionnaire were filled by the Visually impaired students with the help of volunteer librarians who helped them in reading out the questions from the computer screen, during the last concluded CBT exam at the CBT section of the Nnamdi Azikiwe Library, UNN. This volunteer librarians offered similar assistance to the same students by helping them to read the CBT exam scripts and assisting them to tick out the selected items from the questionnaire. The data generated from the study were analysed using frequency distribution and mean.

Results and discussion

Demographic variables

Table 1: Category of respondent by sex

Sex	Frequency	Percentages
Male	38	40%
Female	57	60%

Table 1 revealed that 38 of the respondents were male while 57 of the respondents were females

Table 2: Category of respondents by year of study

Year of study	Frequency	Percentages
First year	34	38%
Second Year	27	30%
Third year	21	23%
Fourth Year	13	14%

The above table showed that 38% of the respondents were in the first year; 30% of the students were in second year while 23% and 14% of the respondents were in third and fourth years respectively. It was also discovered that, none of the respondents were in 5th or 6th years of their academic programmes.

Table 3: Availability of Blind and Visually Impaired students in the study areas

Items	Frequency	Percentages
Does your University admit students who are blind and visually impaired	87	96%
If yes, are you allowed to use your University Library, like other students?	31	34%
Does your Library offer any special service to help you to access information resources in the library	32	36%

The table revealed that majority of the respondents agreed that University of Nigeria admits students who are blind and visually impaired with 96%. Secondly, their response of 34% shows that they are not allowed to use the University library like other students without deformity. Also it was discovered from the table that 3, that is 36% out of 100% indicated that the special services offered to help them access information resources in the library is low.

Research question 1: Table 4: Information Literacy skills possessed by blind and visually impaired students.

S/N	Skills	VHP	HP	LP	NP	X	Decision
1	Ability to recognise when information is needed	25	17	45	3	2.7	Accepted
2	Ability to locate the needed information	38	39	10	3	3.2	Accepted
3	Ability to retrieve information	41	33	12	6	3.3	Accepted
4	Knowledge and appreciation of computer hardware and software	18	25	25	22	2.4	Rejected
5	Using computer to gain access to the internet for information search	40	38	9	3	3.4	Accepted
6	Ability to evaluate and use effectively the needed information	19	17	37	17	2.4	Rejected
7	Downloading and storage of digital information	25	31	15	19	2.7	Accepted
8	Ability to use Computer with JAWs application to access information	36	43	7	4	3.2	Accepted
9	Ability to use computer with Zoomtext application to effectively	33	40	10	7	3.1	Accepted

The result presented in table 4 indicates that the information literacy skills that are highly possessed by the blind and visually impaired students in UNN include: ability to use computer to gain access to the internet for information with the mean score of 3.4, followed by ability to locate the needed information with the mean rate of 3.1, and ability to retrieve information with the mean score of 3.2 among others as can be seen from the table. It was discovered that the students knowledge and appreciation of computer hardware and software had a mean score of 2.4 and ability to evaluate and use effectively the needed information scored 2.3 meaning they possessed this skills to a very low extent. During the interview session, it was observed that all the students that were interviewed agreed that they possessed ILS as indicated on the above table.

However, the results agreed with the work of Nkiko (2010) who stated that the ILS requires ability to recognize when information is needed, ability to locate, evaluate and use effectively needed information. Similarly, the findings is in line with the work of Brophy and Caven (2007) have explored two programmes of the assistive technologies that are beneficial

for the blind and visually impaired students, acronym JAWS (Job Access With Speed) and Zoomtext. JAWS will enable a visually challenged individual to interact with the computer in the same way a sighted persons would. There by enabling them to navigate the information world.

Research question 2: Table 5: Methods of imparting ILS to the Blind and Visually Impaired Students

N= 90

S/N	Methods	SA	A	D	SD	X	Decision
1	By academic libraries organizing special training on ILS for the blind and visually impaired	30	36	12	12	2.9	Accepted
2	Training on the use of assistive technologies such as Jaws and Zoomtext application software by libraries for the blind and visually impaired	40	38	7	5	3.2	Accepted
3	Training on the installation of JAWs and Zoomtext application software by university libraries to aid research and learning	37	39	4	10	3.1	Accepted
4	Attending workshops/conference and seminar	15	25	22	28	2.3	Rejected
5	Appointing librarians with specialized skills to man the training programme for the visually and impaired students	34	41	4	11	3.0	Accepted
6	Giving hands-on training and practice of ILS to the blind visually impaired by libraries and MIS (management information science) staff	38	35	11	6	3.1	Accepted
7	Through exchange of ideas between colleagues and friends	35	38	21	5	3.1	Accepted

From the table 5: The result presented in table 3 indicated that the respondents agreed that items 1-3 and 5-7 were accepted as effective and efficient means of Methods of imparting ILS to the Blind and Visually Impaired Students. This was evident in their positive responses to six out of the seven items a high mean rating. Only item 4 on the table was rejected. The rest of the items received the minimum number of mean score of 2.50 and a maximum of 3.2. The table showed that ILS could be imparted to the blind and visually impaired students through Training on the use of assistive technologies such as Jaws and Zoomtext application software with a mean score of 3.2; hands-on training and practice of ILS with a mean score of 3.1; through exchange of ideas between colleagues and friends with the mean rating of 3.1; appointing librarians with specialized skills to man the training programme for the visually and impaired students with a mean score of 3.0. Attending workshops/conference and seminar scored 2.3 which indicated that the respondents disagreed with that item as a means through which they may be helped in acquisition of ILS. Some of the students that were interviewed accepted all the items as it is shown on the above table as

the effective and efficient methods of acquiring ILS. The finding of this study is similar to the findings of (Cole, 2002), that observed that through training, skills are taught and learnt. Equally, the findings agreed with that of (Ugwu & Ekere, 2010) who stated that training is the process through which people learn new skills or techniques, that will transform them from the state of ineffectiveness to being able to perform ILS effectively. The work of Brophy and Craven, (2007), supported the findings, this is because they suggested that there is need to train Blind and visually impaired students on assistive technologies (JAWS and ZOOMTEXT) which include both hardware and software. They insist that once these skills are acquired, it will enable the blind and visually impaired persons to read, print, use a computer, take note and communicate via paper and e-mail. They concluded that with these, the physical challenged can gain access to information from library catalogs, databases and websites and be able to participate effectively and keep up to date in their fields.

Research question 3 Table 6: Challenges encountered by the visually impaired students in acquisition of information literacy skills

N= 90

S/N	challenges	SA	A	D	SD	X	Decision
1	Poor power supply	40	36	11	3	3.8	Accepted
2	Poverty of the students	36	43	6	5	3.2	Accepted
3	Lukewarm attitude of visually impaired students	38	39	10	3	3.2	Accepted
4	Lack of dedicated computers for Visually impaired in the Library	45	33	8	4	3.3	Accepted
5	Lack of appropriate technically volunteer skilled staff	43	41	2	4	3.4	Accepted
6	Stigmatization as a result of the disability	35	46	5	4	3.2	Accepted
7	lack of internet connectivity	32	33	13	12	2.7	Accepted
8	Lack of computers dedicated for Visually impaired in the Library	39	40	5	6	3.2	Accepted

Table 6 showed the nature and ranking of challenges facing by the visually and impaired students in the acquisition of ILS. The study showed that Poor power supply and Lack of appropriate technically volunteer skilled staff with mean rating of 3.8 and 3.4 respectively hinders greatly the acquisition of ILS of librarians. This was followed by Lack of dedicated computers for Visually impaired in the Library with the mean score of 3.3; poverty of the students, with the mean rating of 3.2. Other challenges as shown by the table include: Lukewarm attitude of visually impaired students with the mean score of 3.2, lack of internet connectivity and Lack of computers dedicated for visually impaired in the library with the mean score of 3.2. During the interview session, the students' interviewed concord to the

above items as challenges encountered by the visually impaired students in acquisition of information Literacy skills.

The findings of the study is related to the findings of Okore and Njoku (2012) who identified challenges faced by LIS professionals to include, lack of constant electricity supply, lack of internet connectivity, poverty, among others. They recommended that if these problems are properly addressed that ILS would be acquired with easy.

Research question 4: Table 7: Strategies for enhancing ILS acquisition for the blind and visually impaired

S/N	Strategies	VA	A	IA	VIA	X	Decision
1	Incorporating ILS training in the use of library and study skills course taught by Librarians to students	33	41	6	10	3.0	Accepted
2	Designing ILS as a compulsory course to all students in the university curriculum	40	28	14	8	3.0	Accepted
3	Organizing librarians and management information science (MIS) staff, being stake holders, to teach the course and demonstrate the skills to the students with visual impairment	30	34	7	19	2.8	Accepted
4	Creating a sub section of the university library with appropriate furnishing, to assist the blind and visually impaired to acquire the ILS	34	33	8	15	2.9	Accepted
5	Leaving the students with visual impairment to acquire the ILS unaided by pre-determined guidance/ course	11	17	25	36	2.0	Accepted
6	State of the Art IL/ ICT facilities should be provided to the library for IL practice for the students in that section	43	28	8	11	3.1	Accepted
7	Sufficient and realistic IL/ICT facilities to be made available in the library for training purpose	42	39	4	5	3.3	Accepted

The result presented in table 7 indicates that the respondents agreed that all the items mentioned in the table, except one, are effective strategies for enhancing ILS acquisition for the Blind and visually impaired. The evidence is seen in the mean rating of their responses on the table, which are all above the minimum acceptance level of 2.5 mean score.

During the interview session, the president of the visually impaired student union and two students from each department stated that the ILS could be enhanced in UNN through the listed items as enumerated in the table (1-7) above. The findings agreed with the work of Abubakar and Bala (2013) who advocated that librarians and lecturers should be strongly committed to exposing students with disabilities to the philosophy and application of information literacy as an integrated course in institutions of higher learning in Nigeria. They

maintained that when this is administered from the point of entry, it will facilitate teaching and learning process.

Conclusion/Recommendation

It is evident from the study that ILS was highly possessed by visually impaired students of University of Nigeria. The ILS they possess include ability to recognise when information is needed; ability to locate the needed information; ability to retrieve information. Also, using computer to gain access to the internet for information search; ability to use Computer with JAWs application to access information, and ability to use computer with Zoomtext application to effectively are others abilities they possess. The study also identified some methods of acquisition of ILS by the visually impaired students. Prominent among them are training on the use of assistive technologies such as Jaws and Zoomtext application software by libraries for the blind and visually impaired, training on the installation of JAWs and Zoomtext application software by university libraries to aid research and learning and appointing librarians with specialized skills to man the training programme for the visually and impaired students etc.

It is obvious that with the mountain of challenges in existence, the acquisition of information literacy by the visually impaired student will be hampered thereby incapacitating them in all ramifications to pursue their career and communicate effectively in learning, academic study and research. Hence, the researchers proffered some suggestions that can ameliorate these problems. These suggestions include:

1. Incorporating ILS training in the use of library and study skills course taught by Librarians to students
2. Providing regular power supply or electricity generating set with automatic change over
3. Provision of scholarship to the people with disability
4. Designing ILS as a compulsory course to all students in the university curriculum
5. Organizing librarians and management information science (MIS) staff, being stake holders, to teach the course and demonstrate the skills to the students with visual impairment

6. Most importantly, equipping a sub section of the university library with state of the art IL/ ICT facilities and appropriate furnishing, to assist the blind and visually impaired students to acquire the ILS

It is expected that if these suggestions are implemented the visually impaired students will be carried along like students without any form of disability in the ILS acquisition train. Also, it will create opportunities for the visually impaired students to enhance their access to quality information, evaluation, organization and use of information independently as a fundamental strategy of learning, scholarship and research.

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