

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Library Philosophy and Practice (e-journal)

Libraries at University of Nebraska-Lincoln

November 2020

ACCESS TO LIBRARY FACILITIES AND RESOURCES BY STUDENTS WITH VISUAL IMPAIRMENT AT UNIVERSITY OF EDUCATION, WINNEBA.

Nana Opoku Acheampong

University of Education, Winneba, opokunana22@gmail.com

Samuel Kweku Hayford

University of Education, Winneba Faculty of Educational Studies, skahayford1259@gmail.com

Gifty Nana Yaa Rockson

gnyrockson@uew.edu.gh

Daniel Dogbe

University of Education, Winneba, ddogbe048@gmail.com

Follow this and additional works at: <https://digitalcommons.unl.edu/libphilprac>

 Part of the [Accessibility Commons](#)

Acheampong, Nana Opoku; Hayford, Samuel Kweku; Rockson, Gifty Nana Yaa; and Dogbe, Daniel, "ACCESS TO LIBRARY FACILITIES AND RESOURCES BY STUDENTS WITH VISUAL IMPAIRMENT AT UNIVERSITY OF EDUCATION, WINNEBA." (2020). *Library Philosophy and Practice (e-journal)*. 4564. <https://digitalcommons.unl.edu/libphilprac/4564>

ACCESS TO LIBRARY FACILITIES AND RESOURCES BY STUDENTS WITH VISUAL IMPAIRMENT AT UNIVERSITY OF EDUCATION, WINNEBA.

Abstract

This case study focused on how students with visual impairment access library facilities and resources at the University of Education, Winneba. Data were gathered through focus group interviews from 48 out of 99 undergraduate students with visual impairment. Purposive sampling technique was used to select the participants for the study. Data were analyzed thematically using color coding for the categorization of themes. The results indicated that students with visual impairment had some difficulties accessing the physical infrastructure of the libraries. It was revealed that learning materials of the University libraries were not in accessible formats, and the braille library only produced chapters of books for students with visual impairment. The results further indicated that students with visual impairment in the University wanted the management of the University to purchase assistive devices for them for personal and independent use. The study recommended that the management of the University's libraries should ensure the provision of more technological devices that will produce learning materials in accessible formats for students with visual impairment to promote the use of library resources.

Keywords: Experiences, Access, Visual Impairment, Library Resources, Facilities

1. Introduction

University libraries play a critical role in the academic lives of students and staff. The library is an important resource center where students are expected to access a wide range of academic information and enrich their learning experiences (Gebrehiwot, 2015). The libraries in the universities provide relevant information resources for teaching, learning and research (Agyen-Gyasi, 2008), yet not all students are able to access library resources. Gebrehiwot (2015) expressed that in many studies that investigated the experiences of students with disabilities, there was evidence that libraries were not organized in such a way that they would satisfy the needs of those students. Baro and Fyneman (2009) found out in their study of information literacy among undergraduate students that most students in Nigerian universities lack the sophisticated skills that are needed to exploit the university library's information resources, both print and electronic. Most

students have difficulty with the cataloging system when adequate library orientation service is not provided. Nonetheless, the ability to use libraries and information sources, both print and electronic, is becoming an integral part of undergraduate study in most African countries (Agyen-Gyasi, 2008; Baro, & Zoukemefa, 2011).

Some authors believe that the inability of students to use library resources is due to insufficient education of students on how to access library resources. Hooks, Rahkonen, Clouser, Heider, Fowler (2007) remark that "teaching students how to use the university library resources had been a challenge for academic librarians for most of the twentieth century and has emerged as a high priority for academic librarians in the twenty-first century as well." (p. 1). The need for library orientation and user education for students was emphasised over two decades ago by Fidzani (1995) indicating that it introduces students to facilities and resources in the library, makes students independent users and learners in the library, establishes the library as the centre of academic activity, provides basic understanding of the library so that users can make efficient use of library material and services and also educates users about information sources and resources and how to exploit such resources effectively and efficiently.

1.1 Literature Review

The use of library facilities is an integral aspect of university education. Libraries are important sources of information and academic materials that help to broaden the cognitive domain of the students. Agyen-Gyasi (2008) examined the user education programmes for newly admitted students at the Kwame Nkrumah University of Science and Technology (KNUST) Library Ghana. The author identified some problems the library faces in user-education programmes as students' lack of interest to participate in the programme, lack of personnel in the libraries, training needs of librarians, intermittent internet connectivity and financial constraints. Some studies have been conducted in Ghana and other African countries examining the access and use of library facilities by students, including students with disabilities who are usually the minority group of students in the universities.

In a study which sought to establish the extent to which library and information services were available to students with visual impairment at University of Ghana, Legon, Ayiah (2007)

found that students with visual impairment were dissatisfied with library and information services provided. The case study involved students with visual impairment, braille transcribers, librarians and policy makers in the institution as participants revealed that the premises housing library and information services for students with visual impairment were not fully accessible to the students with visual impairment. Ayiah further found that brailled materials on the shelves were outdated and not relevant in meeting the information needs of students with visual impairment. The author also found the need for special training for all staff who serve students with visual impairment. Generally, students with visual impairment appear to have difficulties accessing library facilities ranging from physical infrastructure, print materials and electronic information. There is a manifestation of many difficulties by students with visual impairment in accessing physical infrastructure in their environments. Gustafson-Pearce, Billett and Cecelja (2005) contend that to a student with visual impairment, the physical world presents many challenges. The author further pointed out that, for a student with visual impairment, finding the way through a complex environment is fraught with dangers, both actual and imagined.

Most educational institutions handicap their students with disabilities due to lack of modifications in the environment to aid accessibility. Students with disabilities must gain complete access to school facilities such as the library for improved participation in learning and consequently enhance their academic and social learning outcomes (Mastropieri & Scruggs, 2000; O'Brien, 1998). This emphasizes the relationship between access to physical facilities and academic and social advancement. Shevlin, Kenny and McNeela (2002) conducted a qualitative study in Irish post-primary schools with 16 participants who were taken through a semi-structured interview. The findings revealed that access to physical facilities such as the library, lecture halls, and access to curricular did not appear to be addressed in formal school policy. Participants had to continually inform others of their needs and ask for help which put pressure on their social lives, their sense of others and of self. This indicates that access to physical infrastructure in educational institutions remains a nightmare to students with visual impairment.

Samson (2011) completed a study on the best practices for serving students with disabilities in eight academic libraries in four Rocky Mountain States, USA. Samson interviewed the librarians directly responsible for library services to students with disabilities to establish how their practices reflect the 1990 Americans with Disabilities Act (ADA) and comply with the new 2010

Department of Justice regulations. Findings revealed that the needs of students with disabilities were being met as students were able to physically access facilities with little or no difficulties. All libraries had either been retrofitted to accommodate students with disabilities and new structures were being constructed according to universal design standards. In the effort of the libraries to meet the physical accessibility needs of students with disabilities, Samson found that the libraries had multiple entryways with ramps, elevators, adjustable computer tables, universal adjustable keyboards, accessible study desks, stand-up study or computer tables, adjustable seating and aisles for easy movement. She also noted that 87.5 percent of the libraries collaborated with the Disability Services in providing assistive technology to promote access. The current study focuses on students with visual impairment in one public University in Ghana.

In another study, Ekwelem (2013) organized a focus group interview on 194 disabled (visually impaired and mobility challenged) library users in 9 universities in Enugu State, Nigeria. The responses to interview items regarding accessibility to the library building and furniture revealed that there was lack of facilities such as adjustable table and keyboard tray, ramps, lift with disabled friendly features and automatic-opening doors. This made the respondents perceive among others that libraries were established to serve only non-disabled users and that there is inadequate knowledge of the needs of those who do not or cannot use the library. The current study differs from Ekwelem's study because the current study did not include students with physical challenges.

Majinge and Stilwell (2013) contend that "information is essential to all human beings and every library's aim is to provide the right information at the right time and in the right format to its patrons regardless of race, religion, age, nationality and language" (p. 1). Academic libraries should be designed to be universally accessible, and should have equipment in place to enable all users including students with disabilities to get maximum benefit from the library's materials and services (Deines-Jones, 2007). It is therefore obligatory on library management in universities to provide the same level of service to students with disabilities as is provided to users without disabilities (Ekwelem, 2013). In order to meet the needs of visually impaired library users in University, some authors assert that libraries must provide appropriate selection of books in formats that are usable by students with visual impairment such as large print, audio-books, talking books, and Braille materials (Gunde, 1991; Majinge and Stilwell, 2013). However, Ndumbaro

(2009), Majinge and Stilwell (2013) and Tungaraza (2010) found that students with visual impairment in the Universities libraries do not have books in Braille or large print format causing them to depend on human readers for information.

Higgins (2013) noted that the advent of internet and world wide web in the late 1980s and early 1990s created new avenues for the dissemination of information and that access to information has evolved from being restricted to physical space to being available through remote access. This has provided the opportunity for students including students with disabilities to access information anywhere at any time (Dadzie, 2005; Ekwelem, 2013). Universities libraries have the responsibility to train students on how to access electronic information that are available to them. In a study conducted by Dadzie (2007), an acting librarian at the University of Cape Coast stressed the importance of Information Retrieval Course (IRC) library staff offer to students. The participant said the IRC was to equip students with skills to enable them to access and retrieve information in traditional, hybrid and digital libraries. Interestingly, the librarian at the University of Ghana Balme Library disclosed in the study that information skills training which included training on the available electronic resources (e-resources) in the library and how to effectively search the databases were only offered to graduate students at the beginning of the academic year as part of library literacy. Meanwhile an earlier study which focused on the training needs of users of three public university libraries in Malaysia with regard to electronic resources concluded that there is the need to design a training programme that would enhance the ability of all students to use electronic resources (Basri, 2003). Academic libraries need to have effective internet connectivity (Baro & Asaba, 2010) in this era of electronic databases where the web is the first place information users look for information (Stuart, 2009). For students with visual impairment to benefit from electronic library resources computers connected to the internet and equipped with screen readers such as Window-Eyes are necessary.

Sunrich and Green (2006) conducted a survey on the programmes for students with visual impairment on the available assistive technologies for library patrons with visual impairment and the training programme in using available assistive technologies in 25 universities in United States. Out of the 6 institutions profiled, it was revealed that only one library provided 7 assistive technologies while the other institutions provide a maximum of two (Kurzweil 1000 and JAWS) out of the fifteen assistive technologies listed. The authors also found that students were not trained

to use the available assistive technology and staff was also not trained to support students with visual impairment to use the assistive technology mainly due to budgetary constraints. In a similar study Agyen-Gyasi (2008) identified training needs of librarians, irregular internet connectivity and financial constraints as some problems facing the user education programme at the Kwame Nkrumah University of Science and Technology (KNUST) Library Ghana which culminates into students' inability to use electronic resources.

The University of Education, Winneba has provided an online database (WINNOPAC) and e-resource for students to aid accessibility of information. In the study of computer competencies of students with disabilities at the University of Education, Winneba, Teye (2014) found out that students with disabilities have positive attitudes towards computers and that much of the skills possessed by the students was related to word processing activities. With twenty-nine 29 out of the 46 participants indicated that they cannot search for information on the internet, it is important to know how students with disabilities access the online database and other electronic resources of the university library. The objectives of the current study were to find out how students with visual impairment at University of Education, Winneba access the university libraries'; (1) building and furniture (physical infrastructure), and (2) print and electronic learning materials (resources).

2. METHODOLOGY

2.1 Participants

This qualitative study employed the case study research design to find out how students with visual impairment access library facilities and resources at the University of Education, Winneba. The population for the study was 99 undergraduate students with visual impairment at UEW. Forty-eight (48) students were purposively sampled for the study. The participants consisted of 31 males and 17 female students with visual impairment between the ages of 21 and 41 years. Twenty-three of the participants were students with low vision while 25 of them were blind. The sampled students were undergraduate student who had completed the first year of their 4-year bachelor's degree programmes in Departments of Special Education, Social Studies Education, Political Science Education, English Education and French Education. However, final year students were not included in the sample because they were on internship programme outside campus at time data was collected.

2.2 Instrument

A semi-structured interview guide was developed to gather data for the study. The semi-structured interview guide, made it possible for the researchers to make follow up to answers, for immediate clarification of concerns and ambiguity of statements of responses by the respondents (Ary, Jacobs, & Sorensen, 2010). A focus group semi-structured interview was conducted to elicit data from the participants for the study. The researchers chose focus group interviews because it encourages participants to speak out so that the researcher can learn what the range of views of participants are, in order to generate a collective rather than an individual view of phenomena (Bogdan & Biklen, 2007; Cohen, Manion, & Morrison,., 2007).

2.2 Procedure for Data Collection

The researchers sought verbal consent of participants of the study before beginning the data collection. Creswell (2012) maintains that it is essential to respect the participants of a study and the site where a research takes place. According to Creswell, this respect is shown by gaining permission before entering the site. The purpose of the study was explained to the participants and they were assured of the necessary confidentiality of information to be gathered. In view of the different schedules of participants' activities on campus, appointments to meet focus group members were scheduled in the evenings where participants had some leisure periods. Focus group semi-structured interviews involving 8 students with visual impairment in 6 different groups were conducted on the sample with interview items based on the research objectives. The interview sessions which lasted between 30 to 35 minutes each were conducted at the resource room for students with visual impairment. The interviews were conducted in evenings of November 15, 2019, November 17, 2019 and November 19, 2019

The participants had the opportunity to express their feelings and experiences without undue pressure on them. The interview was tape recorded with the permission of participants and transcribed for analysis. Before analysis of the data, the researchers scheduled another meeting with the focus groups and the transcripts were read to the participants to confirm that the transcripts represented the views they shared.

2.3 Data Analysis

The data was analyzed qualitatively using narrative themes from the interview data recorded and transcribed. Transcripts of the interview data were given codes as Group 1, Group 2, Group 3, Group 4, Group 5 and Group 6 for identification of responses from the various groups. Fraenkel and Wallen (2009) noted that the first step in coding data to assign identification numbers to every group from whom data has been collected. Colors were further used to code the focused group interview data from the focus groups for categorization to know the themes that emerged from each research question (Bogdan & Biklen, 2007; Creswell, 2012; Dogbe, 2015). The green, blue, red, yellow, pink, purple, orange, cyan, violet and brown colors were used to highlight and code the categories from the data. The ten colors facilitated the categorization of data from which the themes emerged. According to Bogdan and Biklen (2007), coding allows for the categories and patterns emerging from data to be decided in advance and facilitates the interpretation of smaller units since the analysis begins with the researchers reading all of the data to gain the sense of the whole. The researcher used verbatim expressions of the students in reporting the data where necessary.

3.0 Results and Discussions

3.1 Access to libraries building and furniture (physical infrastructure)

In regards to access to the university libraries physical infrastructure, the students complained about how difficult it is for them to access the university libraries' building and furniture. Concerns with the location and the safety of the outside and inside environment of the University's libraries were apparent from the analysis of the comment of the students. The students registered their displeasure with the locations and the environment of the libraries building. The students indicated that one of the libraries is located at the topmost floor of the building while some of the gutters around the building of main library were not covered which compromises their safety in movement to the library. The following remarks indication some groups and individual responses to some questions relating to access to university library facilities.

The students in Group 6 remarked that:

Using the university libraries' physical facilities require us to move from our various locations to another. However, one of our greatest concern is the ability to move safely in and round the university libraries. We have problems with the uncovered gutters around the library building because it inhibits our safe movement to the library. Also, we are not always comfortable to go to the library located at the fourth floor of the Social Science Block. Some of us are afraid of height, coupled with the fact that we can not see, discourages us from using that library facility (Students is Group 6).

Where the library is located is not favourable to persons with disabilities, especially those of us with visual impairment. The one at the faculty block is located at the topmost floor, which is the fourth floor, which makes it very difficult to access because the elevator is always not functioning (Verbatim expression by a student in Group 4).

Students in Group 3 had this to say:

When we were in the first year, some of us decided to visit the library to learn but we had difficulties getting into the library building because we had to circumvent uncovered gutters with the help of our partial sighted friend to access the facility. If we were not extra careful, we would have slip and fall into the gutter. Also, the seats are closely packed such that it requires the eye for you to easily maneuver your way through and sit to read (Students in Group 3).

Another student added that,

Even the braille library is located at the pinnacle of the faculty block, you will get tired when you want to visit there. The location is not favorable at all; it is not easy accessing it. Personally, I don't like going there because if these difficulties. (Verbatim expression by a student in Group 5).

These findings corroborate that of Ekwelem (2013) who revealed in his study regarding accessibility to the library building and furniture that, there was lack of facilities such as adjustable table and keyboard tray, ramps, lift with disabled friendly features and automatic-opening doors

for students with disabilities. This made the respondents perceive among others that libraries were established to serve only non-disabled users and that there is inadequate knowledge of the needs of those who do not or cannot use the libraries. Disputing the findings of the current study is that of Samson (2011) who found that the needs of students with disabilities were being met as students were able to physically access library facilities with little or no difficulties. Samson revealed in the study that all libraries had either been retrofitted to accommodate students with disabilities and new structures were being constructed according to universal design standards. In the effort of the libraries to meet the physical accessibility needs of students with disabilities, Samson found that the libraries had multiple entries with ramps, elevators, adjustable computer tables, universal adjustable keyboards, accessible study desks, stand-up study or computer tables, adjustable seating and aisles for easy movement. Samson further noted that 87.5 percent of the libraries collaborated with the Disability Services in providing assistive technology to promote access.

2.2 Access to print and electronic learning materials (resources).

Findings from the analysis of data revealed that, some provisions have been made by the university libraries management to make the library materials accessible to students with visual impairment. However, all the group's interview indicated that although provisions have been made in the form of some assistive devices, the quantities of the assistive devices are inadequate compared to the number of students with visual impairment in the University. Also, it could be noted from the analysis of the expressions of the students that the management of the university libraries did not provide complete library books in accessible formats such as braille and bold print. Students indicated that they had the opportunity to get some chapters of the books in only braille format. It was further revealed that the Resource Centre for Students with Special Needs that support in providing information and other learning materials for students with a visual impairment only had access to handout produces by the lecturers to reproduce in accessible formats for them. The following remarks indicate some groups and individual responses relating to questions on access to printed materials or resources in the university libraries.

The students in Group 4 remarked:

There are no books in the libraries meant for students with visual impairment. No books in braille, audio books or others. The section of the library meant for student with visual impairment did not have any book on its shelves in braille. We only had

some chapters of books brailled for us or given in softcopy to those who have laptops. We would have preferred to go to the braille library and pick a book that has all its pages and content in braille to read so that we can better understand the content of the book. We also want the management of the University to buy some of the assistive devices like the hand held magnifier and CCTV for some of us for personal and individual use so that we could access information even outside the braille library and in our hostels (Students in Group 4)

Some of us are students with low vision and will have maximally benefited from the low vision devices such as the Zoom Text, CCTV and hand held magnifier in the braille library but they are only one each which means only one person can use it at a time which shows how inadequate these devices are compared to our number. But I must say that there are some library staff at the braille library that help get information on some topics from chapters of some of the library books or internet and braille them for students who are blind (Students in Group 1)

I was at the library last semester with a friend to search for information for an assignment but I couldn't find any accessible material to make use of. There were not brailled books, talking books or bold print books. Since then I have not been there again (Verbatim expression by a student in Group 4)

One student expressed that:

Some of us prefer to listen to the content of learning material and books in the library so I want most of the library books in audio version or have some devices that can scan and read print like Eye-Pal Solo in the library so that I can access the content of books in the library but is no such device or audio book even at the braille library so I don't like going there (Verbatim expression by a student in Group 2).

Another student added:

I think management of the university library should purchase more of the assistive devices. The assistive devices there are not even enough in number and variety to

meet the needs of all categories of students with visual impairment. Also they must ensure that we have more of the library resources in braille, large print, audio and softcopy (Verbatim expression by a student in Group 3)

I think the University should buy more of the assistive devices and give to each of us to use so that we can submit it when we finish our programmes. I have a device like an Eye Pal Solo or CCTV in my hall of residence, I can borrow some books from the library and read at home at my convenient time (Verbatim expression by a student in Group 1).

Various studies have reported similar findings indicating that students with visual impairment in the most university libraries do not have books in braille or large print format making them to depend on human readers for information (Ndumbaro, 2009; Majinge & Stilwell, 2013; Tungaraza, 2010). Interestingly, it could be note that students with visual impairment want management of the University to purchase assistive devices for them for personal use rather than locating it at a designated place for use by all the students.

Further analysis of participants' comments revealed lack of students' knowledge of the university libraries e-resources and how to access them. The students indicated that they only went through general orientation with their sighted colleagues on the use of the libraries but were not given special orientation and training as students with visual impairment to enable them access both print and e-resources of the libraries.

Students in Group 3 indicated:

The university librarians do not orient us on how to access any of the University's e-resources. They only take us through general orientation with the sighted on the use of the library but do not do any special orientation for students with visual impairment on how to access the university libraries' facilities. Some of us don't even know about any e-resources. Maybe the University is not ready to let us know about that (Students in Group 3).

Two students stated that:

I am hearing about the University's online resources for the first time. I don't know anything about that and we have not been trained to access information from that source (Verbatim expression by a student in Group 1).

We have not been trained on library issues. We don't know anything about library issues. We have not been trained to search for information from the e-resources of the University (Verbatim expression by a student in Group 5)

Another student noted that:

We are not aware of the availability of e-resources of the University not to talk of being trained to access it (Verbatim expression by a student in Group 4)

Consistent with these findings is the results of a study by Dadzie (2007), which revealed that information skills training, which included training on the available electronic resources in the library and how to effectively search the databases, were not offered to undergraduate students at the University of Ghana. In alignment with the findings of this study, Sunrich and Green (2006) found out that out of the six institutions profiled; it was revealed that only one library provided 7 assistive technologies while the other institutions provide a maximum of two (Kurzweil 1000 and JAWS) out of the fifteen assistive technologies listed. Sunrich and Green's authors also found that students were not trained to use the available assistive technology and staff were also not trained to support students with visual impairment to use assistive technology mainly due to budgetary constraints.

It was obvious from the comments of the students that because the needs of some of students with visual impairment were not met to some extent, so they were not visiting the library frequently. These revelations were consistent with "Tinto's model of student's departure or retention", where Tinto specifically indicated that the quality or degree of academic and social integration into the life of the institution significantly influences the decision of a student to withdraw or persist in an institution or activity (Tinto, 1975: 1982). This implies that, the experiences of students with visual impairment with regards to access to University's library facilities determine the students continues visit to or withdrawal from visiting the library.

4.0 Conclusion

It was concluded that experiences students with visual impairment in accessing the university libraries facilities and resources were reasonably good. It also realised that accessing the libraries' physical environment, building, and furniture was not without some difficulties. The participants felt the management of the university libraries did not do enough in ensuring that learning materials in the libraries are accessible to them. It was also established that the students lacked knowledge of the university libraries' e-resources and how to access it. It was recommended that the management of the university libraries should provide more of the assistive or technological devices that will produce learning materials in an accessible format for students with visual impairment. Again, the study recommended that the university libraries should ensure that special orientation sessions are organized for students with visual impairment to aid them to search for information from the various platforms of the university libraries.

References

- Agyen-Gyasi, K. (2008). User Education at the Kwame Nkrumah University of Science and Technology (KNUST) Library: Prospects and Challenges. *Library Philosophy and Practice (e-journal)*, Paper 193, 1-6.
- Ary, D., Jacobs, L., & Sorensen, C. (2010). *Introduction to research in education*. New York: Wadsworth, Cengage Learning.
- Ayiah, E. M. (2007). Provision of library and information services to the visually challenged students in University of Ghana, Legon. *Library Philosophy and Practice (e-journal)*. Paper 1369. Retrieved from <http://digitalcommons.unl.edu/libphilprac/1369>
- Baro, E. E., & Zoukemefa, T. (2011). Information literacy programmes in Nigeria: A survey of 36 university libraries. *New Library World*. 112(11/12), 549-565. doi:10.1108/03074801111190428
- Baro, E. E., & Asaba, J. O. (2010). Internet connectivity in university libraries in Nigeria: the present state. *Library Hi Tech News*. 9(10), 13-19. doi:10.1108/07419051011110603
- Baro, E. E., & Fyneman, B. (2009). Information literacy among undergraduate students in Niger Delta University. *The Electronic Library*. 27(4), 659-675.
- Basri, B. H. (2003), "What do they want? What do they need? The challenge of designing tailor-made end-user training programme in the Malaysian academic libraries". Paper presented

- at the conference of Southeast Asian Libraries (CONSAL XII), Brunei Darussalam, 20-23 October.
- Bogdan, R. C., & Biklen, S. K. (2007). *Qualitative research in education: An introduction to theory and methods* (5th Ed.). Boston: Pearson Education, Inc.
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education* (6th Ed). New York: Routledge.
- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th Ed.). Thousand Oaks, CA: Sage.
- Dadzie, P. S. (2007) Information Literacy: assessing the readiness of Ghanaian Universities. *Information Development*, 23(4), 266-277. doi:10.1177/0266666907084762
- Deines-Jones, C. (Ed.) (2007). *Improving library services to people with disabilities*. Oxford: Chandos Publishing.
- Dogbe, D. S. Q. (2015). Preparing students with disabilities to transition from secondary school to postschool settings in Ghana: Perceptions of teachers and administrators. Doctoral Dissertation, Ball State University.
- Ekwelem, V. O. (2013). Library services to disabled students in the digital era: Challenges for outcome assessment. *Library philosophy and practice (e-journal)* Retrieved from <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=2352&content=libphilprac> on 15/02/17.
- Fraenkel, J. R., & Wallen, N. E. (2009). *How to design and evaluate research in education* (7th ed). New York: McGraw-Hill.
- Gibrehiwot, Y. G. (2015). *Towards more inclusive university curricula: The learning experiences of visually impaired students in higher education institutions of Ethiopia*. Unpublished Doctoral Dissertation, University of South Africa.
- Gunde, M. G. 1991. Every librarian should know about the Americans with Disabilities Act. *American Libraries*, 22(8), 380-398. Retrieved from <http://www.jstor.org/stable/25632347> on 21/03/2015.
- Hooks, J., Rahkonen, C., Clouser, C., Heider, K., & Fowler, R. (2007). Information literacy for branch campuses and branch libraries. *Library Philosophy and Practice Library (e-journal)*. Paper 147. Retrieved from <http://digitalcommons.unl.edu/libphilprac/147/> on 16/08/2016.
- Fidzani, B. T. (1995). *User education in academic libraries: A study of trends and developments in Southern Africa*. Retrieved from <http://www.ifla.org/IV/ifla61/61-fidb.htm> on 15/01/15

- Gustafson-Pearce, O., Billett, E., & Cecelja, F. (2005). Perceptual impact of environmental factors in sighted and visually impaired individuals. *British Journal of Visual Impairment*, 23(1), 1-12.
- Kimmel, A. J. (1996). *Ethical issues in behavioural research*. Cambridge: Blackwell.
- Majinge, R. M., & Stilwell, C. (2013). Library services provision for people with visual impairment and in wheelchairs in academic libraries in Tanzania. *South African Journal of Libraries and Information Science*, 79(2), 39-50.
- Mastropieri, M. A., & Scruggs, T. E. (2000). What makes special education special? Evaluating inclusion programmes with the PASS variables. *The Journal of Special Education*, 29(2), 56-62.
- Ndumbaro, R. (2009). *Library and information services provision for people with visual impairment in selected University and public libraries in Tanzania*. Unpublished Master's Dissertation. University of Dares Salaam.
- O'Brien, T. (1998). The millennium curriculum: Confronting the issues and proposing solutions. *Support for Learning*, 13(4), 147-152.
- Samson, S. (2011). Best practices for serving students with disabilities. *Reference Services Review*, 39(2), 260-277. doi:10.1108/00907321111135484
- Shevlin, M., Kenny, M., & McNeela, E. (2002). Curriculum access for pupils with disabilities: An Irish experience. *Disability & Society*, 17(2), 159-169.
- Stuart, D. (2009). Programming skills could transform libraries' role. *Research Information*, 45, 20-21.
- Sunrich, M., & Green, R. (2006). Assistive technologies for library patrons with visual disabilities. *Journal of Access Services*, 4(1-2), 29-40.
- Teye, E. (2014). *Computer competencies of students with disabilities at the University of Education, Winneba*. Unpublished Master's Thesis, University of Education, Winneba.
- Tinto, V. (1982). Limits of theory and practice in student attrition. *The Journal of Higher Education*, 53(6), 687-700.
- Tinto, V. (1975). Dropouts from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45, 89-125.
- Tungaraza, F. D. (2010). Accomplishments and challenges facing students with disabilities at the University of Dares Salaam: Thirty years of navigating the hill. *Paper in Education (PED)*, 29. Dares Salaam: University of Dares Salaam.