ASSESSMENT OF MEDIA ACCESS AND USAGE AMONG VISUAL AND HEARING IMPAIRED STUDENTS

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Abstract

The study employed survey research approach to study all students of the Federal College of Education (Special) Oyo, Oyo state, Nigeria with visual and hearing impairments. There are about 7000 full time and part time students in the school. Out of the entire student population, there are 171 visually handicapped students and 190 hearing impaired students. Purposive sampling was used to select 100 (59 hearing impaired and 41 visually impaired) students. An interview schedule was employed to generate information from the respondents. The research instrument was administered on the respondents for a period of two weeks. Data generated were analyzed with simple descriptive statistics of frequency count and percentage, and results presented in tables and figures. Findings show that people living with visual and hearing impairment have access to different media and use media differently based on their nature of impairment. The study therefore recommends that governments at all levels should take advantage of this by making digital interactive media devices affordable to this group of people while educators should creatively employ these media in their pedagogical practice to impart knowledge to this group of students..

Key words: Media, Media- use, Visual-impairment, Hearing- impairment, Impaired Students

1. Introduction

The case of unequal access to modern communication assets and innovations has been succinctly captured in the term – 'digital divide'. This simply refers to the imbalance in physical access to technology, as well as the imbalance in resources and skills needed to effectively function and participate as a digital citizens. The dichotomous nature of participation in information society has come under various captions – information rich and information poor, 'haves' and 'have nots' which is a clear indication and reality that the world has been divided into classes of people who do and people who do not have access to, and who do not have capacity to use modern information technology such as telephone, television, the Internet and other digital interactive devices. Digital divide harps on the differences based on race, gender, geography, economic status and physical ability (disability)

Naturally, in most developing nations, a great divide exists in access to basic necessities of life in terms of income level (rich and poor), geographical location(urban and rural divide) age(old and young), education (literate and illiterate) gender(male or female) and physical ability (able and disable). Of rarity is any egalitarian structure in place in the developing society among people with no form of disability, let alone people with one form of disability or another. People who suffer one disability or another are rarely accorded much attention in the distribution of economic goods and in other scheme of things.

The increase in modern technologies that help transmit information and provide platform for social networking and media is rapidly emerging in today's 'world culture', however little is known about how these support the social integration of individuals who are hearing or visually impaired. Do these people have access to both traditional and new media? What are the most preferred media? What uses are the preferred media being deployed and how effective are they serving the interest of the users? These questions have consistently evaded the attention of communication scholars as there is dearth of literature on the media use of the disabled people.

The Problem Statement
Hearing and visual impairment are debilitating conditions that erode the quality of an individual's life due to its impact on socialization in the general public which depends on verbal communication and sign language respectively. Speech and sight are the cornerstones of human interaction. Thus, the incorporation of individuals with visual and hearing impairment into everyday social life is always challenging due to difficulty in active participation as far as communication is concerned. However, with the advancement in information and communication technology, media and digital technologies have made life more meaningful. Everybody, including physically challenged people can have access to and also use the different forms of media (whether traditional or new media), particularly, digital interactive media to facilitate communication. As the divide continues to wane, it becomes necessary to carry out an assessment of the level of access to the media, and how the physically challenged, particularly, the visual and hearing impaired people in Nigeria are using the various media. This is the focus of this exploratory study.

The focus of this investigation is guided by the following research questions:
RQ1: What are the media that visual and hearing impaired students have access to?
RQ 2: What are the media that visual and hearing impaired students use?
RQ 3: To what extent are the hearing and visual impaired different in the choice of media used frequently?
RQ 4: For what purposes do visual and hearing impaired students use media?

Following the introduction section is literature review as section two, research method is section three, while section four is discussion of findings, conclusion and recommendations.

2. Literature Review

The problem of unequal access to modern communication assets is a global as well as local issue. The gap between people with effective access and people without access to digital and information technology has been rightly captured in the phrase 'digital divide' (Kawamoto, 2013). This phenomenon has both local and international dimensions. The term represents imbalance in physical access to technology as well as imbalance in resources and skills needed to participate actively in the digital society. The international digital divide, otherwise called 'Global DD' represents the divide in infrastructure. The communication hard-ware that constitute ICT are categorized into telecommunication and computer communication. These technologies responsible for massive news and information across the globe are rather concentrated in the Western industrialized countries, leaving developing countries to grapple with the 'relics' of the technology, most of the time the outdated ones. There is no doubt that the new technologies have benefited those countries that already had access to other resources at greater rates than people or countries with fewer resources. However, whether in developed industrialized west or developing countries that have remained largely dependent on the technologies of the West, digital divide thrive on existing social divide. Social divide exists in every society, so dichotomous access between the 'haves' and 'have nots' of the world is contingent on the extant inequalities in every society. The digital gap is likely to increase inequalities between social groups because new technologies provide opportunities to access information, a necessary tool for participating in a democratic society as well as access to trade, education, job opportunities, healthcare and information. (Haage & Bosse, 2017).

The media of mass communication which are generally grouped under traditional and new media categories have significant effect on the lives of individuals. The traditional media include: radio, television, newspaper, magazine and books while the new media include mobile or cell phone, social media and the Internet and other digital interactive devices. The media (whether traditional or new) have the capacity to inform, educate, and entertain audience. In today's knowledge-intensive society, these basic traditional functions of mass media are intricately inseparable from the normal functioning of any human being and the society at large. To the hearing and visually impaired people, the media rank more than these usual functions, media are assistive technologies that provide access to information. Information accessibility for the visually impaired has been enhanced generally by the development of tactile and auditory based presentation methods as effective alternatives to traditional visual presentation of information (Okuoyibo, 2006).

The people who cannot use regular size print material for purposes of reading are considered to be visually impaired (Atinmo, 2000). There are three categories of visual handicaps: total blindness, low vision and partial sightedness. According to Nnadozie (2006), persons with visual impairment can be categorized into fully certified blind, individuals with low vision, astigmatic patient and the partially sighted. He further states that the visually impaired

or handicapped persons are those whose ocular organs have been so damaged as to make it difficult or impossible for them to receive information through the eyes. As noted by Ocloo (2004), a greater amount of information is gained in a short period of time through the use of visual system than through any other sense organ.

Hearing impairment is the inability of ear to receive and give meaningful interpretation to a message or sound. It is an umbrella term used to describe all aspects of disorder affecting the auditory system (Okuoyibo, 2006). As hearing loss, the loss can range from mild to profound. The organ of hearing is a sense organ that is inevitable to total development of man. It plays a significant role in educational development, language acquisition, society norms, values and interaction among individuals. According to Okuoyibo (2006) when the organ of hearing is defective, the individual affected is defective of sound stimulus and as such have to depend on the use of some amplification devices. Hearing impairment can be congenital, adventitious, pre-lingual or post-lingual. Individuals who are deaf or hard of hearing utilize a variety of assistive technologies that provide them with improved accessibility in numerous environments. The devices will either provide amplified sound or alternate ways to access information through vision or vibration. Caton and Chapman (2016) noted that such technologies can be grouped into three categories, namely: hearing technology, alerting devices, and communication supports. The overarching goal of these devices is to increase accessibility to information for people with hearing difficulties.

Moreover, whether visually or hearing impaired, what this category of people in our society need is not the amount of pity the society can muster but access to assistive technology that can make them function normally as part of the large social network. This includes access to radio, television, online media and digital technologies as well as access in the classroom and other public places. According to Craven (2003), such access should include physical, hardware and software.

Theoretical framework

The study is predicated on Uses and Gratification as well as Diffusion of innovation theories. Uses and Gratification is concerned with what the audience do with the media as against what the media do to the audience. This is a radical departure from the focus of earlier media theories that were based on Stimulus – Response (SR) model. This theory posits that audience members are not passive receivers of media messages but active influencers of the media and their effects. The theorists believe that audience members have uses to which they deploy the media and its messages. According to Rubin and Windahl (1986), the theory was first described in an article by Elihu and Katz in 1959 and employed in research by Blumbler and McQauil in 1969. Folarin (1998), affirms that audience members perceive and retain media messages on the basis of their needs and beliefs. This underscores the relevance of the theory to the current study. Visual and hearing impaired students do make use of various media as assistive technologies.

Another theory that is relevant to this study is the Diffusion of Innovation theory by Everet Rogers (1962). The theory seeks to explain how, why and at what rate new ideas and technology spread. "Diffusion of innovation is the process by which an innovation is communicated over time among participants in a social system". The theory which was originally applied to communication studies by Rogers was later extended to the spread of change through a system by researchers. Emphasis was since placed on diffusion of information among members of media audience (Deutschmann and Danielson, 1960), and adoption of new technologies (Lin and Atkin, 2002), the development and adoption of new media of communication are serving several purposes. Particularly, in the era of massive development in information and communication technology, media generally have taken on new outlook due to the transforming influence of technology. Readily available today are several digital interactive devices that are for everybody's use, except for the limiting factors such as income level, geographical location, age, level of education, gender and physical ability. The rate of adoption of media technologies among physically challenged people remains a hazy idea, although in literature it is evident that physically challenged people, depending on the nature and degree of disability are disadvantaged.

3. Research Method

The study employed survey research approach. All students of the Federal College of Education (Special) Oyo with visual and hearing impairments constituted the target population for this study. There are about 7000 full-time and part-time students in the school. This number include both students without any form of disability and students with forms of disability ranging from hearing impairment, visual impairment, intellectual and learning disability, physically challenged to gifted and talented. Out of the entire student population in the school, there are 171 visually handicapped students and 190 hearing impaired students. Purposive sampling was used in selecting 100 (59 hearing

impaired and 41 visually impaired) students. An interview schedule was employed to generate information from the respondents. Two staff members of the institution who were directly involved in day- to- day interaction with the students were engaged as research assistants. The instrument was administered on the respondents for a period of two weeks. Data generated were analyzed with simple descriptive statistics of frequency count and percentage, and results presented in tables and figures.

Results Presentation and discussion of findings
RQ1: What are the media that visual and hearing impaired students have access to?

Table 1: Distribution of media access among visual and hearing impaired students

Media	Percentage of Access
Radio	15%
Television	10%
Newspaper/Magazine	17%
Mobile Phone	38%
Internet	20%
Total	100

Table 1 shows that 38% of the students have access to mobile or cell phones, 20% have access to the Internet, 17% have access to Newspaper and Magazine, 15% have access to Radio while only 10% have access to Television. This result is further illustrated in the figure below.
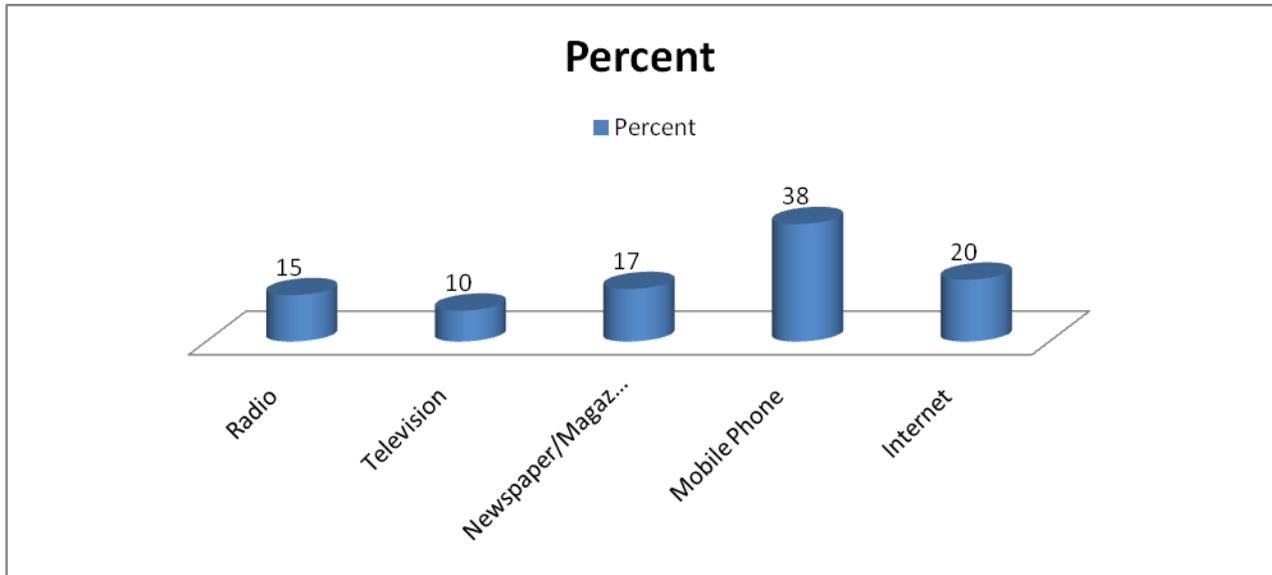

Fig.1 Bar Chart showing percentages of students' access to media

RQ 2: What are the media that visual and hearing impaired students use?

Table 2: Distribution of media use by hearing and visual impaired students

Media	Yes (%)	No (%)
Radio	47	53
Television	**68**	32
Magazine	47	53
Newspaper	**67**	33
Mobile Phone	**93**	7
Internet	**68**	32

Table 2 shows that majority of students with visual and hearing impairment make use of mobile phones (93%). The Internet and Television (68% respectively), Newspaper (67%), Radio and magazine (47% respectively) followed in the order of usage preference.
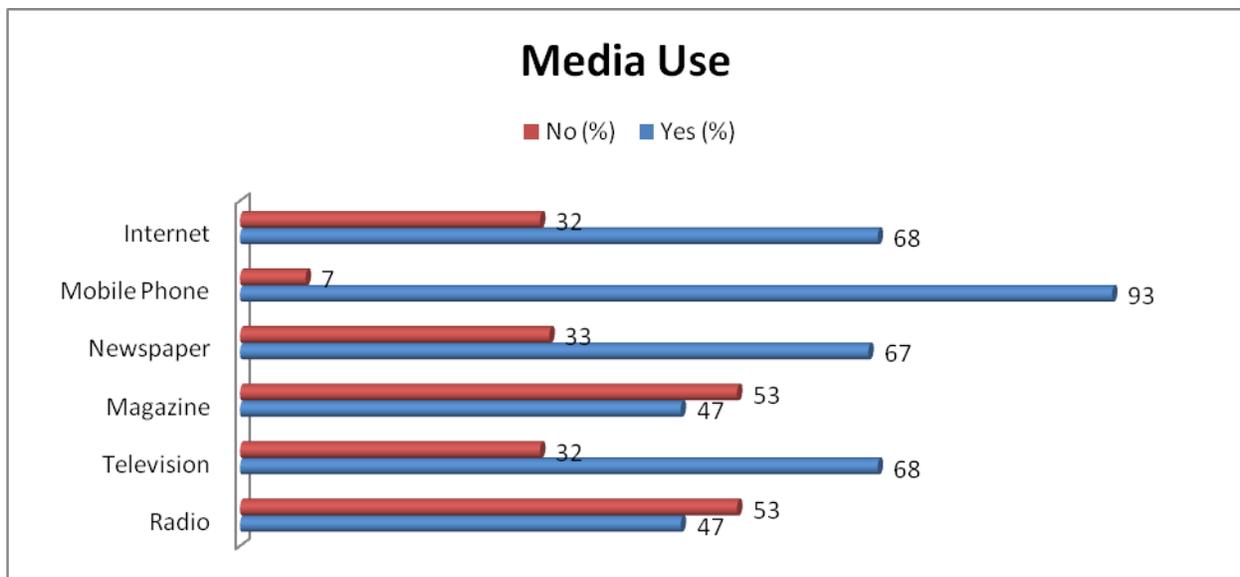

Fig.2 Bar Chart showing media use among visual and hearing impaired students

RQ 3: To what extent are the hearing and visual impaired different in the choice of media used frequently?

Table 3: Cross tabulation of media use by nature of impairment

Nature of Disability	Radio		TV		Magazine		Newspaper		Internet		Cell Phone	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Hearing	14	45	**47**	12	**42**	18	**52**	7	**50**	9	**58**	1
Visual	**33**	8	21	20	6	35	15	26	17	24	**35**	6
Total	47	53	68	32	47	53	67	33	67	33	93	07

Table 3 shows that the hearing impaired students have relative advantage over the visual impaired students in the use of media that have visual orientation than media without visual orientation. Evident in the table is the fact that visually impaired students depend more on Radio(33) and Cell phone (35) but use other media sparingly simply because of the nature of their impairment. On the contrary, students with hearing impairment use all other media apart from radio while they tend to have preference for the Cell phone, (58), Newspaper (52) and the internet (50).

RQ 4: For what purposes do visual and hearing impaired students use media?

Table 4: Cross tabulation of the nature of impairment by purpose of using media

Nature of disability	Purpose of using the media						
	News/ Information	Entertain Ment	Communi Cation	Support	Social ization	Ease off boredom	Total
Hearing impairment Count	11	11	30	3	2	0	59
% Within nature of disability	**18.6%**	18.6%	**50.8%**	8.5%	3.4%	0%	100%
Visual impairment Count	6	5	18	10	1	1	41
% Within nature of disability	14.6%	12.2%	**43.9%**	**24.4%**	2.4%	2.4%	100%
Total count	17	16	48	15	3	1	100
% within nature of disability	17%	16.0%	48.0%	15.0%	3.0%	1.0%	100%

Table 4 shows the purposes for which hearing and visual impaired students use the media of preference. Many of the hearing impaired students (50.8%) use the media of choice for communication, while some students (18.6%) use the media of choice for news and information as well as entertainment. On the other hand, the visual impaired students use media of choice for communication (43.9%) as well as a form of support (24.4%)

4.   Discussion of Findings, Conclusion and Recommendation

The findings of this study on the issue of access to media have shown that people living with visual and hearing impairment have access to different media with 38% having access to mobile or cell phones and 20% having access to the Internet. This finding is not accidental in the sense that all over the world, adoption of cell phone technology as well as the internet technology has been fully maximized. With the globalization of these technologies, people living with disability could not be left behind in its adoption spree. This is in agreement with the submission of Craven (2003) that people living with disability should have access to both assistive technologies which include physical, hardware and software. Findings also revealed that majority of students with visual and hearing impairment do not only have access to but also make use of mobile phones (93%), the Internet and Television (68% respectively), Newspaper (67%), Radio and magazine (47% respectively). However, as expected, the hearing impaired students have relative advantage over the visual impaired students in the use of media that have visual orientation than media without visual orientation. Evident in the findings is the fact that visually impaired students depend more on Radio(33) and Cell phone (35) but use other media sparingly simply because of the nature of their impairment. On the contrary, students with hearing impairment use all other media apart from radio while they tend to have preference for the Cell phone, (58), Newspaper (52) and the internet (50). The findings corroborate the submission of scholars that individuals who are deaf or hard of hearing utilize a variety of assistive technologies that provide them with improved accessibility in numerous environments. Most of them either provide amplified sound

or alternate ways to access information through vision and /or vibration. Barak and Sadosvsky (2008) cited in Oyewumi and Ibitiye (2013) found that hearing impaired youths that use internet and other media are similar to their hearing peers in terms of loneliness and self-esteem and concluded that the use of the internet and other media can help improve the mood, confidence, feelings of security and connectedness among hearing impaired teenagers. Many of the hearing impaired students (50.8%) use the media of choice for communication, while some (18.6%) use the media of choice for news and information as well as entertainment. On the other hand, the visual impaired students use media of choice for communication (43.9%) as well as a form of support (24.4%).

The findings of this study have shown that people living with hearing and visual disabilities use media differently. The use to which various media are put however depends on the nature of impairment. Since the hearing impaired people use media with visual orientation while people living with visual impairment use media without visual orientation, this can be employed in assisting them to live as productive normal citizen. Governments at all levels should take advantage of this by making digital interactive media devices affordable to this group of people while educators should creatively employ these media in their pedagogical practice to impart knowledge to them.

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APPENDIX

Brief Background of the Federal College of Education (Special), Oyo

The need for adequate teacher training programme for potential teachers for special education was articulated since 1974 by the Federal Government of Nigeria in the Third National Plan and in her National Policy on Education 1977 and 1981. The National Policy on Education again emphasized the provision of educational opportunities for all Nigerian citizens without any form of discrimination. Of all the 21 Federal Colleges of Education and the rest 45 State and Private Colleges of Education in the country, FCE(S) Oyo is the only one established to train teachers and other para-professionals in special education for the disabled and the gifted, and other persons with different learning difficulties.

The College which took off as the Federal Advanced Teachers College of Special Education on 5th October, 1977 later became the Federal College of Education (Special), Oyo. This was the culmination of years of planning, dating back to October 1974, when the then Head of State declared the Government's intention to establish a National Special Education Teachers' College.

By Decree 4 of 1986, amended by Decree 6 of 1993, the College along with other Colleges of Education in Nigeria became an autonomous institution. With autonomy, the College now recruits its own work force. The academic programmes of the College are localized among the six existing schools: Special Education, Education, Arts and Social Sciences, Sciences, Languages and Vocational and Technical Education. The College produced its first set of graduates in June 1980, and since then several other sets of graduates including foreign students have been awarded the Nigeria Certificate in Education. Many of the products of the College can be found in many important special education programmes and positions across and beyond the country.

The College operates an admission policy that takes the entire nation as the catchment area. Initially, the University of Ibadan was the moderating and awarding institution for the College's NCE certificates. However, from the 1993/94 academic session, the College started awarding the NCCE certificate.

Since the College took off in 1977, it has been struggling against many odds including lack of understanding of what it stands for, its mandate and roles. It runs all the courses run by all the other conventional Colleges of Education and goes further to emphasize and specialize on Special Education – a more specialized form of teaching and learning. The vision of the Federal College of Education (Special) is encapsulated in the following:

i. To train and produce a crop of highly professional and technically-skilled manpower for special needs education at the primary and secondary levels of education.

ii. To undertake thorough research into the peculiar needs of the gifted and talented in the Nigerian society and advance such information for the improvement of their educational services and fostering of their talents.

The above vision is broken down into the following mission statements:

- To produce highly professional, competent and committed teachers for special education at the primary and secondary levels of education;

- To produce manpower with high level technological know-how that would enable them to operate, maintain and repair specialised equipment and materials for special education;

- To produce a body of young professionals ingrained with attitudes, values and interests compatible with the social and economic circumstances around persons with special needs;

- To create an environment for research into the peculiar needs of people with disabilities and the gifted and talented in the Nigerian society; and

- To encourage the training of serving teachers through Part-Time Studies so as to upgrade their skills.

The uniqueness of this College in all sense of modesty can be hardly compared with any of the other 20 Federal or 415 State and Private Colleges of Education spread across the country.

The Federal College of Education (Special), Oyo as the only one of its kind in Nigeria, caters for the training of Special Education Teachers for all of the States in the Country. It is the only one established to train teachers and other para-professionals in special education for the disabled and the gifted and other persons with different learning difficulties.

The College has the largest population of disabled students that could be found in any higher institution in the country. These include hearing impaired, visually impaired, physically impaired and those with multiple disabling conditions. Many of these students offer courses in such other areas as Science, Arts, Humanities and Vocational and Technical Education.

About 85 percent of the academic staff has Post-Graduate Degrees in Special Education. As at 1996, the College was reported to be the best "with qualified staff in Special Education not only in Nigeria, but in West, North, East and Central Africa", (a UNDP 1996 Report). More than what can be found among, even, Universities, offering undergraduate and graduate courses in Special Education; the College also has the largest concentration of specialized facilities for teaching and training of teachers of special education in Nigeria. It was in view of these attributes that in 2002, the Federal Government through the Education Trust Fund designated the College as a Centre of Excellence for Research in Disabilities in Nigeria.

Special Education teacher training involves adaptations of many things done and used in the regular or conventional Colleges of Education. For example:

(a)   The curriculum has to take into consideration the problems of:
- The deaf who cannot hear and communicate in the usual way that hearing people do (i.e. speech) and so have to be communicated to through and communicate by a special form of language – the sign language, finger spelling (and total communication).
- The blind who cannot see and so cannot read what the teacher writes on the board or from printed textbooks. So a different form of reading and writing – Braille (reading raised dots using the finger tips) – has to be taught them to read.
- Every School, Department and Subject area makes these adaptations to accommodate the problems and needs of the disabled persons that their students will be teaching after leaving the College.

(b)   The environment and physical facilities have to be adapted to enable those on wheel chairs, on crutches, and those who are visually impaired to gain access.