THE USE OF MOBILE PHONES TO ENHANCE INCLUSIVE AND EQUITABLE EDUCATION FOR ALL. A CASE OF DISABLED YOUTHS IN BAMENDA, CAMEROON.

Abstract

This paper investigates how physically disabled youths in the town of Bamenda, the capital city of the North West Region of Cameroon are able to fit in the Sustainable Development Goal 4 especially with technological advancement. The Sustainable Development Goal 4 aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. The emergence of technology has been an asset to learning in the 21st Century. This research seeks to understand how the physically disabled youths benefit in this wave of technology as concerns their education enhancement. We set off with the following questions. How can phones be used by disabled youths such as the blind and deaf? How can phones help the education of physical disabled youths? Proposed answers to the above stated questions were; Mobile phones are wired with apps and settings which help people living with disability. Through mobile phones, physically disabled youths can access learning materials on the internet and through voice notes. The main theoretical resource for this study is Technological Mediation Theory by Verbeek. Purposeful samplings of 30 physically disabled youths in the city of Bamenda were our focus. Interviews and observation were the means through which data was obtained. Results have it that, among the disabled, the deaf are very active of phones and social media with video aids and the possibility of writing. While the blind have audio setting on their phones, which help them get most information they want. Their trainers as well learn quite well on how to accommodate them and carry them along their respective training.

Key Words: Mobile Phones, Inclusive and Equitable, Education, Disabled Youths

Background

Cameroon is located in the West of African Continent. Amongst its ten regions, Bamenda is the capital city of the North West Region. Like most, if not all communities, part of Bamenda is made up of disabled citizens. The main categories of disability that is prevalent in Bamenda, North West Region, include; visual impairment, hearing impairment, musculoskeletal impairment and clinical depression. Among these disability types, this work is based on two. That is, visual impairment and hearing impairment. Those affected by these impairments are known as the blind and deaf respectively. Visual and hearing impairment make up part of physical disability, though not only those, since we notice that musculoskeletal impairment is also physical. However, as progress is made on this paper, whenever we refer to physical disability, it is limited to visual and hearing impairment, which is the focus of this research. This is because our focus is on the use of mobile phones in relation to education and sustainable development, and the above selected impairments can cause a limitation in the use of mobile phones.

According to the North West Cameroon Disability Study Report, about 82 persons are visually impaired, while about 127 people have hearing impairment. They make up about 2.3% and 3.6% respectively of the population of the North West Region of Cameroon. The report, in

general terms reveals that persons living with disability are 3.6 times more likely never to have married, 3.7 times more likely not to have worked in the previous 7 days, and are 3 times more likely to be the poorest quarter than adults without disability. Children with disabilities were also found to be almost 20 times less likely to be in school compared to children without disabilities, and amongst those enrolled, almost 3 times more likely to have repeated a grade.

Problem, Research Questions and Hypotheses

As the world experiences a shift in digital technology, there is the tendency to ponder whether or not all group of persons benefit from the gift of technological advancement. With this moving trend, people are able to study (e-learning or mobile learning), work and do business online. In order to be effective with the use of mobile phones and the internet, one needs the aid of the visual and hearing sensory organs, since most of the material on the phone and internet are audios, videos, picture images and notes. It is with this in mind that the researcher sets out to question how people with visual and hearing impairment succeed to use mobile phones and the internet, especially with Sustainable Development Goal 4 in mind. This Goal aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. 'All' in this sense of entirety includes persons with disability as well. Hence, the focus of this paper, which is to investigate how physically disabled youths of Bamenda access their mobile phones and the internet for lifelong learning and enhance economic sustainability.

In a bit to inquire how those with disability succeed to get sustainable education via their mobile phones and the internet, we ask the following questions.

i. How can phones be used by disabled youths such as the blind and deaf?
ii. How can phones help the education of physically disabled youths?

Tentative answers to the research questions are.

i. Mobile phones are wired with apps and settings which help people living with disability.
ii. Through mobile phones, physically disabled youths can access learning materials on the internet and through voice notes.

Theoretical Framework and Review of Literature

The main theoretical tool that will drive this work across is the Technological Mediation theory by Verbeek. The theory states that any technology will help to shape human actions and experience, and will therefore have an impact that can be understood in ethical terms. Its concern is developing new ways to understand the social roles of science and technology.

According to the International Centre for Evidence in Disability (ICED), The North West Cameroon Disability Study Country Report, the following were findings of research of Disability prevalence in the North West Region of Cameroon. Significant participation restrictions and environmental barriers were experienced by children and adults with disabilities of all ages compared to those without disabilities in areas such as domestic life and going to school or work. Adults with disabilities were 3.6 times more likely never to have married, 3.7 times more likely not to have worked in the previous 7 days. The impact of disability is particularly strong amongst children and young adults.

With this information, the researcher sought to investigate the possibility that people with disability can learn online, and even use the digital platforms to showcase and advertise their business, which can learn to economic sustainability.

According to Roulstone et al, more disabled people are out of work, but claiming disability-related benefits. While at the same time, more disabled people are in work. He affirms this possibility with an overall increase in population of disabled people. They further underscore that well over one million disabled people want to work, but are not working. Given the important impact that being in employment has on reducing poverty and social exclusion, this situation is good for neither disabled people, nor for the wider economy and society.

This is a study of the economic sustainability in relation to disability in Great Britain. Nevertheless, this is a reflection of Cameroon as well. While stakeholders try to see how to improve the work possibilities of people living with disabilities, some disabled youths seek means of improving their own livelihood, rather than wait for employers' call. This is hence the interest of this research. To access how in trying to accomplish this desire to work and earn income, disabled youths are being able to meander through with their mobile devices.

According to The Joint Position Paper on CBR, a similar research was carried out in 1994 to promote a common approach to the development of Community-based rehabilitation programs. Despite the progress made since then, many people with disabilities still do not receive basic rehabilitation services and are not enabled to participate equally in education, training, work, recreation or other activities in their community or in wider society. So, following on from the CBR Strategy, efforts must continue to ensure that all individuals with disabilities irrespective of age, sex, type of disabilities and socio-economic status, exercise the same rights and opportunities as other citizens in society - "A society for all".

CBR is a strategy within general community development for the rehabilitation, equalisation of opportunities and social inclusion of all people with disabilities. CBR is implemented through the combined efforts of people with disabilities themselves, their families, organisations and communities, and the relevant governmental and non-governmental health, education, vocational, social and other services. This research mentions the fact that, there is a strong correlation between disability and poverty. Poverty leads to increase disability and disability in turn leads to increased poverty. Hence, a majority of people with disabilities live in poverty as a result of higher rates of unemployment. Lack of access to health care and rehabilitation, education, skills, training and employment contributes to the vicious cycle of poverty and disability.

Since people living with disabilities cannot have full assurance for mainstream training and, education, they could seek other means of education and training, which can be online, with the use of their mobile devices.

Roulstone points out a relationship between disability and technology. His work basically concerns models of disability attempt to locate the role technology plays in disabled people's lives. He underscores that historically, concern has been directed towards enhancing the human condition or to be more precise to address the function of technology in relation to facilitating 'capabilities'. Of course, extreme technocentric constructions can both misread the benefits of technology and also offer misplaced hope as to the potential of technology. He indicates that

many professionals that connect with disabled people in their work do so not in conditions of what might be called practice utopias, but to promote the most efficient use of scarce resources and often with a specific intervention. The scarce resource tools he mentions are directed towards technological assets. And of course, connections are made via many means, including digital tools such as mobile phones. He also states that in many contexts a technological means-analysis of how technologies can aid, cure and augment disabled people is more pervasive than an ends-analysis, which concerns why an intervention or provision is taking place. The speed and ubiquity of technology arguably accelerates this process, and one might say the very advancement of technology forms its own narrative that technology justifies its own use and appetites for its use.

However, his study generalises the concepts of disability and technology. Since, he underlies the fact that he will not delve into the disciplines of disability and technology as theoreticians in the respective disciplines, but is out to provide an interdisciplinary assessment of disability, in relation to technology. What can be underlined from his work, in relation to this research, is that, the changing trend of technological advancement is not neglected by people with disability, since it also serves a platform to connectedness.

Rimmerman expresses his view on digitalisation and disability using the expression 'digital divide'. He defines digital divide as the gap between those who can effectively use new information and communication technology (ICT) and those who cannot due to the lack of access and/or necessary skills. While those 'information-haves' (people with no disability) use technology to gain better education and jobs and to be more involved in the community. While 'information have-nots' (people with disabilities) fall behind and in fact miss opportunities in an emerging information-based society. The definition covers gaps of Internet access, which affect individual engagement, mobilisation and participation.

This view, more than any, sets to give this research a direction. This is to investigate the limitations that people with disability face as concerns the access of digital tools such as the mobile phones. That is, finding out whether or not people with disability cannot use their digital devices to get education, skill and subsequently jobs.

Methodology and Design

Mpoche (2018), approaches research designs to "refer to the different types of inquiries within the quantitative, qualitative or mixed method approaches and their role is to give specific direction to the procedure or conduct of the research". This paper will focus on both the qualitative and quantitative data analysis. The method of data collected is questionnaire, interview and observation. Considering the nature of the research, questionnaire was used in the case of youths with hearing impairment, and as for those with visual impairment, the researcher employed the questionnaire, interview and the observatory method. Data collected was analysed using SPSS. The number of physically disabled youths interviewed was about 30.

Presentation of Findings and Analysis

Table 1: Gender of Respondents

Gender	Respondents	Percentage

Male	11	36.7%
Female	19	63.3%
Total	30	100%

Among the disabled youths interviewed, male respondents were 11, that is, 36.7%. While females were 19, 63.3%, making up a total of 30 disabled youths. They were all based in Bamenda.

Table 2: Age Group of Respondents

Age Group	**Respondents**	**Percentage**
21 – 30 years old	24	80%
31 – 45 years old	6	20%
Total	30	100%

Target respondents are youths, since youths are those mostly learning in order to enhance sustainability and livelihood. 24 respondents are in the age bracket from 21 to 30 years of age, which makes up 80% of the total number of respondents. While, 6 of the respondents are within the age group of 31 to 45 years old, making up 20% of respondents.

Table 3: Type of Disability

Disability	**Respondents**	**Percentage**
Hearing Impairment (Deaf)	18	60%
Visual Impairment (Blind)	12	40%
Total	30	100%

Since our focus is on two main types of disability, that is, hearing impairment and visual impairment. 18 respondents have hearing impairment, this constitutes 60%, while 12 are visually impaired, that is, 40%.

Table 4: Smart Phone Owners

Smart Phone Possession	**Respondents**	**Percentage**
Those who have	30	100%
Those who do not have	/	/
Total	30	100%

The data above attests to the fact that all respondents are in possession of smart phones, following the trend of digital technology. Since the study considered a purposeful sampling of respondents, the researcher intended to study respondents in possession of this mobile device.

Table 5: Education or Training Online

Online Lessons Taken	**Respondents**	**Percentage**

Those taken lessons Online	26	86.7%
Those who have not	4	13.3%
Total	30	100%

A majority of 86.7% respondents have taken lessons online. The lessons mentioned included training on how to live with People with Disabilities, PIRL, how to make omo, groundnut sweet, amongst others.

This shows that mobile phones are of great use to youths with hearing and visual impairment. They can access the phone, and use it to learn something online. Some of the training they take online also helps them establish economic activities.

Table 6: Income Generating Activity

Income Generating Activity	**Respondents**	**Percentage**
Business Owners	22	73.3%
Job owners	4	13.3%
Both	02	6.7%
None	02	6.7%
Total	30	100%

Respondents who are self-employed, that is, own their own businesses are 22, and represent 73.3%. They do businesses like beads, traditional dress marking, weaving, selling, decoration, embroidery designing, shoe mending and shoe making. Those who are job owners represent 13.3%. Jobs they do include teaching, secretary, and social works. Those who are both business owners and job owners, or employees are 2 and represent 6.7%. And those who are not employed yet, neither do they have a business of their own represent 6.7%.

The above data attests to the fact that, most disabled youths contacted are earning something that can enhance economic sustainability. The statistics of the next table will help us know how these youths use their phones as an asset to their income generating activities.

Table 7: Phone assistance to Income generating Activity

Online Activity	**Respondents**	**Percentage**
Learning	3	10%
Advertisement (via apps)	6	20%
Both	19	63.3%
None	2	6.7%
Total	30	100%

From the above statistics, those whose phones assist them solely in learning is 10%, those who advertise make up 20% and those who carry on both learning and advertisement online are 63.3%. While those who do not use their mobile phones for any of these activities represent a percentage of 6.7%.

This proves that the mobile phone gives these youths a favourable platform to improve their income generating activity by learning, advertising or doing both online. Advertising and learning online involves communication. This is done with the use of applications. Our proceeding interest is to understand what kinds of applications are being used by these youths, and how they use them.

Table 8: Apps/Tools that help Disabled Youths

Apps/Tools	**Respondents**	**Percentage**
Whatsapp, Facebook, Messenger	14	46.7%
Whatsapp, Facebook, messenger, YouTube, Google Chrome, TalkBack	3	10%
Whatsapp, Facebook, Messenger, SMS	6	20%
Whatsapp, Facebook, messenger, YouTube, TalkBack	7	23.3%
Total	30	100%

The above table represents a set of applications and tools which youths with disability use. Those who use the set Whatsapp, Facebook, and Messenger represent 46.7%. The set Whatsapp, Facebook, Messenger, YouTube, Google Chrome, TalkBack recorded a percentage of 10%. The group of Whatsapp, Facebook, Messenger and SMS represent 20%. The set Whatsapp, Facebook, Messenger, YouTube, TalkBack recorded 23.3%.

From the above statistics, all respondents are users of Whatsapp, Facebook, and Messenger. Other apps consulted are YouTube, Google Chrome, TalkBack and SMS. These apps and accessibility tool help them to upload items on their status for people to view and contact them in case they need their goods or services. This therefore serves for advertising purposes. Emphasis was laid on TalkBack, as an asset that helps visually impaired people access their phones. TalkBack is a tool found in the Settings (application) of smart phones. It helps read everything found on the phone in audio form. This includes applications, time, and battery percentage. Anything you press on the screen, it reads that out to you. And if you are interested in carrying out a particular task in relation to what you touched, TalkBack instructs you to double-click on the feature again, and access granted. With this, users can log into Facebook, Whatsapp, Call log, Messages, and so on with little or no stress. If you wish to send a text message on any platform of your choice, the tool indicates the position of the text box. Whatever you type is read out to you, so in case an adjustment needs to be made. With this, people who are visually impaired can have access to people on various social media platforms.

Again, they communicate with people through text messages, video calls (especially those with hearing impairment) and audio recording (with people with visual impairment) is permissible.

Table 9: Difficulties Faced with Mobile Phones

Difficulties Faced	Respondents	Percentage
Inability to pick audio calls	18	60%
Inability to see images	9	30%
Both	3	10%
Total	30	100%

According to this statistics, most difficulties faced by respondents are; inability to take audio calls (for those with hearing impairment) and they represent 60%. The inabilities to see and read anything in the form of images (for those with visual impairment) represent a percentage of 30%. And those who have difficulty in both taking calls and reading images represent 10%. Respondents admit that prospective customers would request to call them, or call directly in order to place orders or buy goods. At this point, they will have to send these prospective clients messages and explain their impairment. In this case, some clients are not patient enough and assume they are not capable to handle the contract, because of their impairment. However, others are willing to take a chance with them.

In the case of visually impaired youths, they hardly read images, so it poses a difficulty with trying to learn online, or advertise online. This is because, people tend to send images and in cases of dire need, senders will try to explain the images.

The above data attests to the fact that all respondents face difficulty using mobile phones, though, the problems are manageable. It is better reaching out to the world with the mobile phone than not being able to communicate at all with the extended (online) community.

Conclusion

From the above analysis, the researcher underscores that mobile phone is an asset to the users, even those with hearing and visual impairment. With the help of mainstream applications such as Whatsapp, Facebook and messenger, communication is facilitated and carrying out economic activities is possible. Special adapted tools such as TalkBack is also of great use to visually impaired youths as it reads messages to them. They however wish that if this tool can be adapted to read images, then communication would be much easier.

It is also worth mentioning that the UN Convention on the Rights of Persons with Disabilities and Optional Protocol recommends information, communication and other services, including electronic services and emergency services to people living with disability. This means that the need for these people to own mobile devices is unavoidable.

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