Journal of
Social Issues in Non-Communicable Conditions & Disability
ISSN: 2958-5872
(SINCCD)

Volume 3, Number 2, 2024
www.sinccd.africasocialwork.net

The perceived importance of information, communication and technology in people with disability communities, an explorative study, Mutare Urban, Zimbabwe

Jessica Nokwanda Ncube and Sifikile Songo

Jessica Nokwanda Ncube, Department of Psychology, Manicaland State University of Applied Sciences. Email: Jessica.ncube@staff.msuas.ac.zw/nokhiejn@gmail.com

Sifikile Songo, Department of Applied Psychology, Manicaland State University of Applied Science. Email: sifikile.mlilo@staff.msuas.ac.zw/sfiksongo@gmail.com

How to cite using ASWNet style

Ncube J N and Songo S (2024). The perceived importance of information, communication and technology in people with disability communities, an explorative study, Mutare Urban, Zimbabwe. *Journal of Social Issues in Non-Communicable Conditions & Disability, 3(2),* 280-297.

Abstract

Information and communication technologies (ICT) allow people with disability to interrelate socially and economically among themselves and the wider society. This study sought to explore the perceived importance of information and communication technologies among people with disabilities. An explorative study was conducted in Mutare urban, using a sample size of ten participants with varying disabilities. Purposive sampling was done. Semi-structured interviews were used to collect data which was analyzed thematically. The findings revealed that ICTs were perceived as essential learning tools. ICT provide easy access to information, social support and opportunities for employment. The study also revealed that people with disabilities were faced with stigma and discrimination in their communities, lack of appropriate infrastructure and technological devices in the course of exploiting information and communication technologies. Creating awareness, advocating for accessibility, developing partnerships, provision of mentorship programmes, affordable devices and reliable connectivity were outlined as strategies for promoting and enhancing the use of information and communication technologies in people with disabilities communities. The study recommended that inclusivity should be embraced in the education of information and communication technologies and that the government and other decision-makers need to prioritize information and communication technologies in policy formulation and budgets for people with disabilities.

Key words

community, importance, information and communication technologies, people with disabilities, perceptions, Mutare, Zimbabwe

Key points

1. ICT is important to allow people with disabilities to interrelate socially and economically.
2. ICT provide easy access to information, social support and opportunities for employment.
3. The government and other decision-makers need to prioritize information and communication technologies in policy formulation and budgets for people with disabilities.

Journal of
Social Issues in Non-Communicable Conditions & Disability
ISSN: 2958-5872 (SINCCD)
Volume 3, Number 2, 2024 www.sinccd.africasocialwork.net

Introduction

Information and communication technology (ICT) are all forms of technology applied to the processing, storing, and transmitting of information in electronic form (Emuakpor 2002). ICT includes computers, networks, fax machines, electronic calculators, and pocket calculators, among other things. According to Ayo (2001), ICT is made up of three main parts: computer-based electronic processing; telecommunication-based information transmission; and multimedia information dissemination. It is essentially used for information handling. ICTs can be vital facilitators that help people with disability attain full and equal chances to engage in all facets of society and development (United Nations, 2012). When implementing ICTs, there are a few criteria that need to be kept in mind. ICT has the ability to unite people, but it can also leave people behind when people with disability lack access to ICTs (United Nations, 2012). Some individuals find it difficult to adapt to technological advancements on their own, but with appropriate use of ICT, this handicap can be overcome by developing applications that are both useful and accessible, depending on the type and severity of the disability (Benda et al., 2011). This study illuminates the perceived importance of information, communication and technology in people with disability communities, an explorative study conducted in Mutare Urban, in Zimbabwe.

Background

National Council on Disability (NCD), (1993) asserts for most people, technology makes things easier while for people with disability, technology makes things possible. Therefore, ICT is a useful tool for empowering people with disability. The exclusion and marginalization of people with impairments is a human rights and national economic concern which violates their dignity and increases the welfare burden of a nation. Approximately 15% of the global population faces barriers to education, employment and economic independence (WHO, 2011., World Bank, 2011). According to (Broadband Commission for Digital Development et al. 2013 {BCDD}) access to lifelong learning, skill development, and employment is becoming more equitable for people with disability. Programming related to governance, welfare, socio-economic development, and human rights is increasingly being delivered and implemented through the Internet and ICT (Samant, Matter, and Harniss 2012),by facilitating direct interactions between producers and markets worldwide, developing new strategies for rapidly providing individualized public and social services, opening up new avenues for income generation, and introducing innovations in asset accumulation and financing access, they are revolutionizing the paths towards reducing poverty (Omole 2013; Spence and Smith 2010).

ICTs, such as desktop computers and mobile phones are providing features that help people with disability communicate and access information (Benda, 2010). Off-the-shelf ICT devices come equipped with features like text-to-speech and voice recognition, the ability to alter color schemes and contrast, touch and gesture input, and screen magnification features that previously required specialized independent software and hardware. This helps people with disability to access information and content in a format that suits their perception and preference. For instance, a person with hearing loss can communicate via SMS or instant text

Journal of
Social Issues in Non-Communicable Conditions & Disability
ISSN: 2958-5872 (SINCCD)
Volume 3, Number 2, 2024 www.sinccd.africasocialwork.net

messaging, a person with vision loss can read websites using speech-to-text software, and a person with mobility loss can use voice recognition to control and navigate a digital device (Raja et al., 2013).

Based on estimates from the World Health Organization (WHO) that 15% of the world's population lives with a handicap, this translates to around one billion individuals. According to Okoro et al. (2016), one in four adults in the United States alone have a disability, which is defined by the Americans with Disabilities Act (ADA) as "a physical or mental impairment that substantially limits one or more major life activities. People with disability in Africa have a especially low rate of computer and Internet access (Furuholt and Kristiansen, 2007; Samanti et al 2013). Thus, African people with disability are at the short end of ICT discourses and discussions.

African countries have made considerable efforts to create policies that are in line with protecting the rights of persons with disability. Unfortunately, these policies remain unimplemented, leaving PWDs unserved in today's digital economies. Recent years have seen much greater interest being paid to the rights of people with disability (Palmer, 2012; Eide and Ingstad, 2013). The 2006 United Nations Convention on the Rights of People with Disabilities that came into being in May 2008 (UN Enable, 2008) has particularly been instrumental in championing the rights of people with disability. The Convention places considerable emphasis on the accessibility of ICTs, and particularly in Article 9 requires signatories to: "Promote access for persons with disability to new ICTs and systems, including the Internet" (UN, 2006) and to "Promote the design, development, production and distribution of accessible ICTs and systems at an early stage, so that these technologies and systems become accessible at minimum cost" (UN, 2006).

The government of Uganda has enacted laws and policies that address access to ICTs by PWDs. However, there are still challenges in the implementation of these and ensuring that persons with disabilities do benefit from ICTs initiatives and programs (Mugimba, 2008). In recognition of the spirit of the UN CRPD, Kenya's National ICT policy aims to promote an ICT environment accessible for PWDs (Ministry of Information, Communication and Technology, Kenya, 2019). South Africa and Egypt have also established policies to increase accessibility for persons with disability, with the South Africa Information and Communication Technology Research, Development & Innovation Strategy (2015) establishing ICT for Disability as a distinct research domain.

Eleven per cent of working-age individuals in Zimbabwe have a disability. Rates are higher in rural (12.9%) than urban (7.5%) areas (Federation of Disabled Persons of Zimbabwe, 2014). Chimuka (2023) states that in order to close the gap in the use of ICT by individuals with disability, it is also crucial to train educators and specialists who work with students who have special needs, develop resources for training and information, and provide incentives for educators to improve their use of digital teaching opportunities. In order to give people with disability access to information and knowledge, it is necessary to set up a network of resource centres outfitted with specialized assistive devices. There is also a need to train educators on

Journal of
Social Issues in Non-Communicable Conditions & Disability
ISSN: 2958-5872 (SINCCD)
Volume 3, Number 2, 2024 www.sinccd.africasocialwork.net

how to use ICTs in special needs education and develop online platforms that would compile case studies and best practices about the use of digital opportunities for teaching people with special needs (Herald, 2023).

According to UNESCO (2021), 15% of people worldwide live with a disability, ICT can significantly improve their lives by expanding their range of activities and helping them integrate more fully into their communities on a social, cultural, political, and economic level. Building the capacities of information, media, education, and ICT professionals on the design and application of inclusive technologies, mobilizing partners for global awareness, and designing appropriate policy frameworks and tools for the integration of inclusive ICTs are some of the strategies that have been proposed to combat social exclusion, discrimination, and poverty (UNESCO, 2024).

Conceptual framework

Issues surrounding disability and people with disability have gone through different phases of conceptualization and perceptions by societies, from ancient to modern times, in different ways (Leshota 2013). Besides this, the phenomenon of disability has remained too complex to handle. To place disability in the universally accepted context, the World Health Organization (WHO) developed the International Classification of Functioning, Disability and Health (ICF) for application to various aspects of health (WHO 2001). This was meant to explain that disability is an umbrella term which covers impairments, activity limitations, and participation restrictions including attitudinal barriers (Taking IT Global, 2013).

The Social Model of Disability is a 'new' thinking which views disability as the creation of society (Tugli, Klu & Morwe, 2014). This study adopted the social model of disability to argue the case for the importance of ICT for people with disabilities. The researchers used this model to view the continued link to disabled people's reflections on their experience with disability. The social model of disability asserts that personal constraints do not result in incapacity (Perry & Buder, 2012). It argues that a condition is only considered incapacitating when it stops an individual from achieving their goals or necessities. According to Brunton and Gibson (2009), the Social Model of Disability emerged in opposition to what was purported to be a damaging 'Medical Model' which conceives disability as primarily a medical problem, entailing personal tragedy and requiring treatment.

Proponents of the Social Model argued that while the 'impairments' of people with disability were physical, their 'disability' was a social phenomenon; the product of environmental, economic and cultural barriers erected by oppressive society (Oliver & Bailey, 2002). According to Georing, (2015), altering the discourse surrounding disability can also alter our understanding of it. This model suggests that disability are impairments which are conceptualized as potential functional constraints. The use of the social model helped the researchers uncover the importance of ICT in a community of people with disability and develop a contextualized model of the perceptions of the disabled participants.

Journal of
Social Issues in Non-Communicable Conditions & Disability
ISSN: 2958-5872 (SINCCD)
Volume 3, Number 2, 2024 www.sinccd.africasocialwork.net

What can be deduced from the philosophy of the Social Model of Disability is that it considers people with disability as an integral and indispensable part of society. This means that they have roles to play in all human endeavors and development, and that the barriers that prevent them from playing such roles are created by society (Tugli, Klu & Morwe, 2014). The adoption of a Social Model of Disability marks an important theoretical paradigm shift from the individualistic medical model with its emphasis on diagnosis, treatment and rehabilitation to a more permissive social justice system (Leshota 2013).

Methodology

Research approach and design

The qualitative research approach was used in this study. The qualitative research paradigm focuses on interpreting social or human problems to uncover the underlying causes (Addo & Enoh, 2014). According to Shava and Nkengbeza (2019), qualitative research strives to get a comprehensive understanding of human behavior and pre-existing problems. The study adopted an exploratory research design to explore the importance of ICT in people with disability communities in Zimbabwe. This design aims to obtain familiarity with a phenomenon and acquire new insight in order to formulate a precise problem (Stebbens, 2001). Exploratory study seeks causes and reasons and presents evidence to support or disapprove an explanation or forecast. It is undertaken to identify and report on some correlations between distinct components of the event under study (Boru, 2018). Exploratory research mainly focuses on interpretation of information that is given. Exploratory research involves a smaller sample size; therefore, the results cannot be accurately interpreted for a generalized population (Swaraj, 2019). Exploratory research was found appropriate for this study because it allowed for in-depth and contextual understanding of the phenomenon of ICT and its importance in people living with disabilities communities in Zimbabwe.

Study population and sampling procedure

Semi structured interviews were done with people with disability in Mutare urban, aged between 20 and 50 years some of whom were employed. A purposive sampling procedure was followed to recruit participants and participation was voluntary. Verbal consent was granted.

Data collection instrument

In this study semi structured interviews were used as an instrument of collecting data. Ten individuals were asked pre-determined research questions. The semi structured interview method seeks depth and explanation from participants on the components under research that require more understanding. It has pre-determined questions, which can be amended, reworked, explained to the interviewee, or removed if situation deems essential (Robson, 2002). In this study, the researchers used semi structured interviews, a qualitative research method, so as to gain an in-depth understanding of the participant's feelings and beliefs on specific topics.

Journal of
Social Issues in Non-Communicable Conditions & Disability
ISSN: 2958-5872 (SINCCD)
Volume 3, Number 2, 2024 www.sinccd.africasocialwork.net

Additionally, it gives the interviewer platform to be prepared to ask follow up questions and probe for more detail (Heath, 2023).

The researchers made use of semi-structured interviews so as to explore the perceived importance of information, communication and technology in people with disability communities in Mutare Urban, Zimbabwe. The researcher made use of questionnaires with a mixture of close ended and open-ended questions. The language used was English, which is the basic standard language in Zimbabwe, however where there was need for interpretation of the question and or translation, the researcher would verbally do so. According to Plumridge et al. (2012) when research requires detailed in-depth information, then active interpretation only at certain stages is appropriate and so as verbatim translation.

Research study questions

1a. What is your understanding of ICT?
1b. Which devices do you use to access ICT?
2a. Is ICT important to people with disabilities?
2b. Explain your answer in 2a
3. Explain the role of ICT in your community of people with disabilities.
4a. Are there any challenges which you face in your community.
4b. Explain your answer in 4a
5 How would you promote ICT in your community of people with disabilities?
6 Suggest ways of enhancing ICT activities in your community of people with disabilities.
7 What recommendations do you have on ICT in your community of people with disabilities?

Data analysis

The collected data was analyzed through thematic analysis. According to Crossely (2021), thematic analysis is the study of meaning patterns. Thematic Analysis gives an opportunity to understand the potential of any issue more widely (Marks and Yardley 2004). Data was collected and stored in audio form. Upon analyzing it, at first, the data was transcribed verbatim. Emerging themes were analyzed from the collected data to determine the meaning. The research questions for the study are what guided the procedure. The present study employed thematic analysis on data obtained from semi structured interviews, as it is a particularly valuable method for obtaining subjective information such as participant experiences, viewpoints, and opinions (Caulfield, 2019). Thematic analysis allows the researcher to determine precisely the relationships between concepts and compare them with the replicated data (Namey et al., 2008). Further details are divulged on the results section below.

Ethical considerations and management of data

Ref/ Ethical Clearance No: RBC/2024/02

Journal of
Social Issues in Non-Communicable Conditions & Disability
ISSN: 2958-5872 (SINCCD)
Volume 3, Number 2, 2024 www.sinccd.africasocialwork.net

The Research Committee of Manicaland State University of Applied Sciences evaluated the research proposal of this study in light of appropriate ethical requirements, with special requirements of the Code of Conduct for Research and the University Policy and Research Ethics. The application was approved by the research committee on the understanding that all ethical conditions related to voluntary participation, informed consent, anonymity, confidentiality of the information and the right to withdraw from the research must be explained to participants in a way that will be clearly understood and a signed letter of informed consent will be obtained from each of the participants in the study. In preparation of the collection of data, the researchers obtained consent to collect and share data and assured protecting the identity of the participants and their personal identifying information. The researcher enhanced trustworthiness by ensuring technical accuracy in recording and transcribing data and having prolonged engagement with the data. On reporting the findings, the researchers used extracts from participants' verbatim accounts.

Results

Understanding of ICT

The excerpt below shows the participants' understanding of ICT:
'ICT is any technology which is used to create, manage or transmit information. This includes the processes and procedures done on the computer, mobile phones and other electronic devices using the internet to communicate and exchange information ***(Participant 5)****'.*
ICT was understood as a mode of communication using technology, it involves ways of accessing information and doing other internet related activities. ICT was outlined in several categories, namely, computer related gadgets like desktops, laptops and tablets, mobile phones, smart phones and smart televisions, home appliances which include, smart thermostats and smart light bulbs, wearable technology such as smart watches and fitness trackers. Virtual reality and augmented reality headsets and smart speakers were also categorized as ICT.

The importance of ICT in the PWD community

In this section the researchers sought to understand the importance of ICT to people with disability. The following excerpts depict the participants' perceptions:

Provides learning tools

'ICT is very helpful in that you can learn online from home. People with physical disability such as cerebral palsy, can access information and learn without moving from the home environment to the school environment. Furthermore, one gets more information from the internet which they would otherwise get from a physical learning environment. It provides educational resources and serves as a learning tool. For example, sign language is also taught on the internet to those with hearing impairment. People with physical disabilities can use assistive technologies like eye-tracking software or adaptive keyboards to use computers and other devices (Participant 2)'.

Journal of
Social Issues in Non-Communicable Conditions & Disability
ISSN: 2958-5872 (SINCCD)
Volume 3, Number 2, 2024 www.sinccd.africasocialwork.net

'ICTs serve as assistive devices for people with disability in several ways. With ICT a lot of activities can be done and life is made easy. For instance, screen readers, braille by embossers, print and transcription on videos are used with the aid of ICT. Information is communicated and stored in the form of a diary in these devices. These devices are very useful in the learning environment (Participant 4)'.

In this study, the participants highlighted the importance of ICT in the PWD community key to this is inclusive of provision of learning tools. Participants stated that that internet becomes handy in acquiring information and that people with cerebral palsy, have the option not to move to and from school but still get the knowledge they'd require.

Easy access of information

'A lot of information is accessed through ICT. We get information about the disability we have, how to manage and also information about the lives of other people with disability. We also read about the rights of PWDs and global policies pertaining to us. Information on where to access health services can also be obtained quickly. As PWDs we are confined to one place most of the times so through ICTs we can access information about what is happening around the without many challenges (Participant 9)'.

'It helps to access information and communicate with others in ways that might not be possible without it, for example, people who are visual impaired or have low vision can use screen readers to access websites or documents. People who are hard of hearing can use closed caption and real time text to follow conversations and presentations. Generally, ICTs help PWDs to participate in society fully (Participant 5)'.

Easy access of information is another importance in the use of ICT. Off-the-shelf ICT devices come equipped with features like text-to-speech and voice recognition, the ability to alter color schemes and contrast, touch and gesture input, and screen magnification features that previously required specialized independent software and hardware.

Social support

'The role of ICT in communities is multifaceted. ICT can help people with disability to connect with each other and share information, resources and support each other. As people with disabilities, sometimes we face challenges or encounter turmoil, emotional challenges or stress emanating from financial challenges or discrimination. When we join online social support groups we get psychological support from our peers (Participant 1)'.

'ICT is used to promote accessibility and inclusion in our community, for example, websites and applications can be designed to be accessible to people with disability. It can also be used to raise awareness about disability issues and advocate for the rights of people with disabilities. Public spaces can be equipped with technology to make ICT more accessible (Participant 6)'.

Journal of
Social Issues in Non-Communicable Conditions & Disability
ISSN: 2958-5872 (SINCCD)
Volume 3, Number 2, 2024 www.sinccd.africasocialwork.net

ICT is said to be important in that it aids in connecting people. The participants highlighted that ICT plays a multifaceted role in their community because they are able to connect with each other and share information, resources and offer social support.

Obtaining professional opportunities

'As PWDs we network online and also do job searches online. ICT helps us to access information and jobs which are advertised online. Some jobs require applicants to apply using emails. If you don't have skills in ICT you may lose out on jobs. Having a knowledge of ICT enables one to get a job like able-bodied people. Nowadays a lot of tasks in the work environment require ICT skills. Hence job opportunities increase when we network online. ICT also empowers PWDs to self-employ if they have ICT skills. We can type documents for people and also design a lot of things (Participant 3)'.

Findings highlighted that ICT is a window to professional networking and opportunities for employment.

Challenges faced by PWD in accessing ICT

In this segment the participants highlighted the challenges which they face in ICT. The participants indicated that lack of technological devices and appropriate infrastructure and stigma and discrimination are the major challenges faced by PWDs in accessing ICTs. These are the participants' views:

'Most PWDs do not have ICT devices. ICT gadgets are unaffordable for most of us, a lot of people in this community have no laptops or smart phones. Some people cannot afford assistive devices. The cost of WIFI is also high. As a result of these costs there is a wide knowledge gap among PWDs of disability inclusive applications. Their care givers are also not aware of ICT soft wares which could be of help to PWDs (Participant 10).'

'Some PWDs live in environments where they cannot access technological devices like computers. For instances in schools we learn with the able-bodied individuals, some buildings do not have ramps, this is a setback because the environment is not user friendly to PWDs. Some PWDs do not have access to computers or computers with small screens or keyboards which are suitable for the nature of their disability (Participant 1)'.

'PWDs are left out of matters which concern ICT. Some of us have information on ICT but because of stigma against us we get discriminated, we are not heard even in the arena of Information, communication and technology. People think that we are of no use, they do not accept us as we are. We are given last preference in ICT related programs. People do not realize that we need to be empowered through ICT (Participant 2).'

Promotion of use of ICT in PWD communities

Journal of
Social Issues in Non-Communicable Conditions & Disability
ISSN: 2958-5872 (SINCCD)
Volume 3, Number 2, 2024 www.sinccd.africasocialwork.net

In this section the researchers sought the views of the participants on how of ICT can be promoted in their communities and these were their opinions. The participants indicated that use of ICT in PWD communities can be promoted by creating ICT awareness, advocating for accessibility and developing partnerships to facilitate accessibility of ICT. This is what the participants said:

'Creating awareness on ICT in PWD communities is important in that, people are encouraged to take up ICT courses. The benefits of ICT should be outlined to them. This can be done by passing information on programs which are available, possibly through road shows. Some of us have knowledge about ICT, however, some people don't have so there is need to train PWDs and their caregivers on how to use ICT tools (Participant 5).'

'ICT can be promoted by advocating for greater accessibility and affordability of technological devices and bandwidth. If this is done PWDs will readily access job vacancies posted on the internet, hence increasing their opportunities of getting jobs. Donation for ICT gadgets can also be sort and government can also subsidies devices for use by the PWD communities. Construction of u facilities like libraries which are accessible and user friendly to people of varied disabilities is also important (Participant 8).'

'Government can develop partnerships with non-profit organizations which work with PWDs to ensure that ICT is accessible and affordable to this community. Furthermore, efforts can be made to develop assistive devices and other ICT tools that can help PWDs to use ICT effectively. Policies and regulations that promote the use of ICT among PWDs can also be created (Participant 4).'

Enhancing the use of ICT in PWD communities

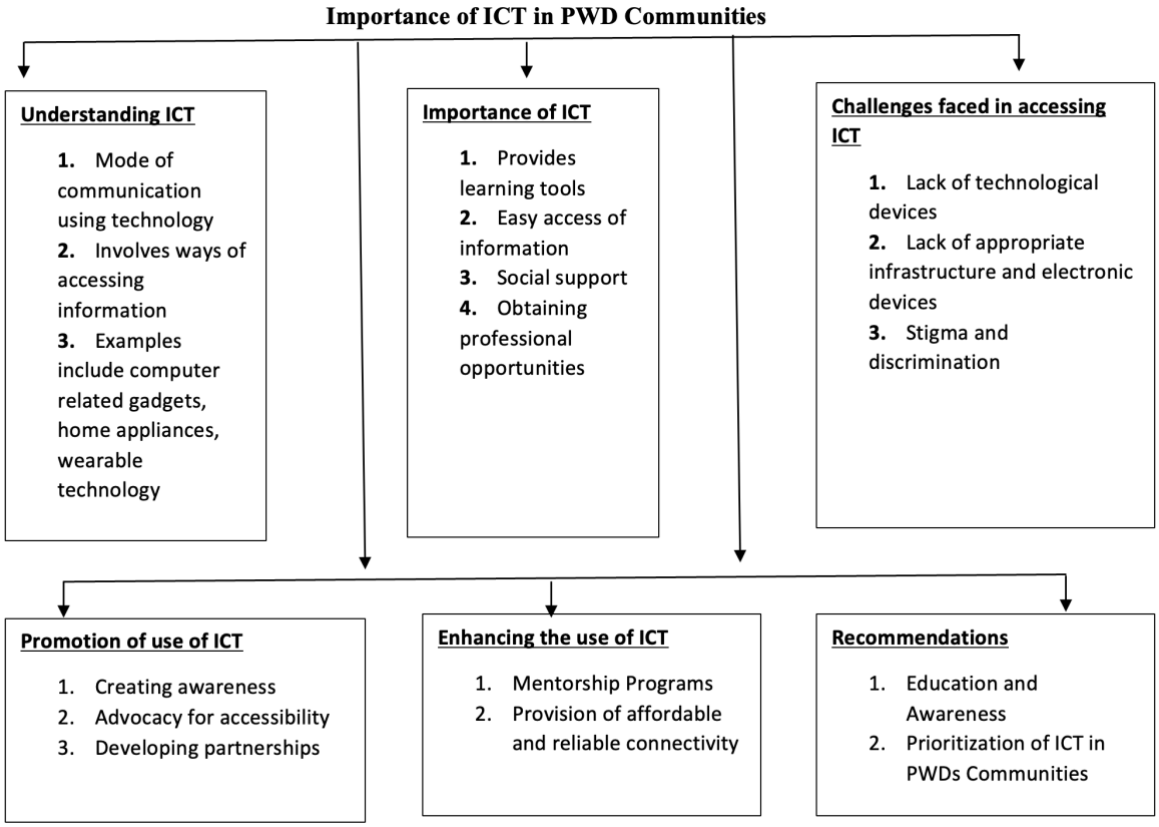
The views on how to enhance the use of ICT in PWD communities were sought. Participants suggested that mentorship programs and provision of affordable devices and reliable connectivity would enhance the use of ICTs. This is what some participants said:

'Mentorship programs can be developed for us by organizations which advocate for the needs of the PWDs, that way we can learn more in a practical way (Participant 7).'

'Providing access to affordable and reliable internet connections would motivate PWDs to explore the use of ICT tools effectively. It is also important to make assistive technologies such as screen readers and alternative keyboards are readily available. ICT businesses and companies can design websites and mobile applications which are user friendly (Participant 3).'

Model of Social Inclusion with disabilities

Journal of
Social Issues in Non-Communicable Conditions & Disability
ISSN: 2958-5872 (SINCCD)
Volume 3, Number 2, 2024 www.sinccd.africasocialwork.net



The model of social inclusion with disabilities is an account by participants on the perceived importance of information, communication and technology in people with disability communities. The participant's responses, in this study perceived as data, were collected, analyzed and presented thus. It has six components; the participants' understanding of ICT, importance of ICT, challenges faced in accessing ICT, promotion of the use of ICT, enhancing the use of ICT and recommendations.

Recommendations

In this section the participants were asked to make suggestions and recommendations to various stakeholders on how PWD communities can fully utilize and benefit from ICT. The participants recommended that education and awareness need to be created on the importance of ICT and that government needs to priorities ICTs in policies and budgets for PWD communities. This is what they said:

'I keep emphasizing education of ICT to the PWDs communities. It is important for organizations to come to our communities and create awareness through workshops and even conduct competitive activities to get PWDs motivated to use ICT for various purposes and in different ways including innovations and creation of products (Participant 10).'

Journal of
Social Issues in Non-Communicable Conditions & Disability
ISSN: 2958-5872 (SINCCD)
Volume 3, Number 2, 2024 www.sinccd.africasocialwork.net

'We are left out of ICT and in some instances left behind in schools, I don't know why, we are regarded as people who are not useful. A lot of organizations talk of inclusivity in education however they do not look at ICT as a fundamental education tool for PWDs. The policies on inclusivity are not implemented or complied to. It is important to train educators and ICT service providers on how to use ICT to support PWDs in the design and development of new technologies (Participant 2)'.

'Governments and other decision makers should prioritize ICT in policies and budgets related to the needs of PWDs. There is a positive future for PWDs in ICT. The government can provide subsidies for ICT in PWDs communities so that we are not left behind. Community spaces can be created in PWD communities for us to gather and use ICT tools and learn from each other. We can get employed if we possess ICT skills. Self-employment prospects are also high if one has ICT competencies, we can offer typing services, sell ICT gadgets and even do repairs (Participant 9).'

Discussion

Understanding of ICT

Emuakpor (2002) described ICT as all forms of technology applied to the processing, storing and transmitting information in electronic form; stressing that the physical equipment used for this purpose include computers, communication equipment and networks; fax machines and electronic, pocket calculator, etcetera. Relating with the study, ICT was understood as a mode of communication using technology, it involves ways of accessing information and doing other internet related activities. ICT was outlined in several categories, namely, computer related gadgets like desktops, laptops and tablets, mobile phones, smart phones and smart televisions, home appliances which include, smart thermostats and smart light bulbs, wearable technology such as smart watches and fitness trackers. Virtual reality and augmented reality headsets and smart speakers were also categorized as ICT.

The importance of ICT in the PWD community

In this study, the participants highlighted the importance of ICT in the PWD community key to this is inclusive of provision of learning tools, easy access of information, social support and obtaining of professional opportunities. Emphasis of the above is given by United Nations (2012) as they highlight that indeed, Information and communication technologies (ICT), when accessible and available, can serve as critical enablers that allow persons with disabilities to realize full and effective opportunities to participate, on the basis of equality, in all aspects of society and development.

Approximately 15% of the global population faces barriers to education, employment and economic independence (WHO, 2011., World Bank, 2011), access to lifelong learning, skill development, and employment is becoming more equitable for people with disability. Programming related to governance, welfare, socioeconomic development, and human rights

is increasingly being delivered and implemented through the Internet and ICT (Samant, Matter, and Harniss 2012), by facilitating direct interactions between producers and markets worldwide, developing new strategies for rapidly providing individualized public and social services, opening up new avenues for income generation, and introducing innovations in asset accumulation and financing access, they are revolutionizing the paths towards reducing poverty (Omole 2013; Spence and Smith 2010). The above literature concurs with the participant's response that ICT is a window to professional networking and opportunities for employment.

Mary Pat Radabaugh, formerly with the IBM National Support Center for Persons with Disabilities, that sums up the importance of technology in the empowerment of persons with disabilities (National Council on Disability 1993), "For most people, technology makes things easier. For people with disabilities, technology makes things possible". Participants stated that that internet becomes handy in acquiring information and that people with cerebral palsy, have the option not to move to and from school but still get the knowledge they'd require. Brenda (2010) also states that, ICTs, such as desktop computers and mobile phones have that help people with disability communicate and access information.

Easy access of information is another importance in the use of ICT. Off-the-shelf ICT devices come equipped with features like text-to-speech and voice recognition, the ability to alter color schemes and contrast, touch and gesture input, and screen magnification features that previously required specialized independent software and hardware. This helps people with disabilities to access information and content in a format that suits their perception and preference. For instance, a person with hearing loss can communicate via SMS or instant text messaging, a person with vision loss can read websites using speech-to-text software, and a person with mobility loss can use voice recognition to control and navigate a digital device (Raja et al., 2013).

ICT is said to be important in that it aids in connecting people. The participants highlighted that ICT plays a multifaceted role in their community because they are able to connect with each other and share information, resources and offer social support. ICT has the ability to unite people, but it can also leave people behind when people with disability lack access to ICTs (Tools kit for disability in Africa, 2012). Some participants highlighted that access to ICT can be a driver in advocacy for the human rights of people with disability. African countries such as Kenya, South Africa, Zimbabwe and Uganda have put in place policies that fight for the right to access of ICT by the people with disability communities. African countries have made considerable efforts to create policies that are in line with protecting the rights of persons with disabilities. Unfortunately, these policies remain unimplemented, leaving PWDs unserved in today's digital economies. Recent years have seen much greater interest being paid to the rights of people with disabilities (Palmer, 2012; Eide and Ingstad, 2013).

Challenges faced by PWD in accessing ICT

Lack of technological devices, lack of appropriate infrastructure and electronic devices, stigma and discrimination are some of the challenges faced by PWD in accessing ICT. This makes the learning environment exclusive of the PWD community. Geographical location plays a pivotal

Journal of
Social Issues in Non-Communicable Conditions & Disability
ISSN: 2958-5872 (SINCCD)
Volume 3, Number 2, 2024 www.sinccd.africasocialwork.net

role when it comes to accessibility of ICT. National Council on Disability (1993) states that the exclusion and marginalization of people with impairments is a human rights and national economic concern which violates their dignity and increases the welfare burden of a nation. Thus, the Tools kit for disability in Africa (2012) concurs by highlighting that there are a few principles that should be taken into consideration while introducing ICTs. Whether one is considering the respective needs of rich and poor, rural and urban, those with access to the internet and those without (the digital divide), ICT has the power to bring people together but, where persons with disabilities lack access to it may be polarizing.

Similarly, UNESCO (2024) acknowledges the presence of stigma and discrimination faced by PWDs communities. The organization proposes that stigma and discrimination should be dealt with through capacitating ICT professionals on the design and application of inclusive technologies. CTs, they can also leave people behind.

Promotion of the use of ICT in PWD communities

To combat issues of ignorance, creating awareness on ICT in PWD communities is important. UNESCO (2021) highlights that use of ICT has the potential to make significant improvements in the lives of persons with disabilities, allowing them to enhance their social, cultural, political and economic integration in communities by enlarging the scope of activities available to them. Findings suggest that the use of ICT in PWD communities will aid the development of innovative solutions for fighting social exclusion, discrimination and poverty, building capacities of information in bringing awareness of its use, media, education and ICT professionals on design and application of inclusive technologies, mobilization of partners for global awareness, designing of appropriate policy frame works and tools for integration of inclusive ICTs (UNESCO, 2024).

Conclusively the above is made mention by the participants in this study that advocacy for accessibility is needed, ICT sensitization is volatile along with development of partnerships. This will alleviate burden on the world's economy which has 15% of its population unable to cater to it. The 2006 United Nations Convention on the Rights of People with Disabilities concur with the participant's views. The Convention places considerable emphasis on the accessibility of ICTs Accessibility of ICT will alleviate the burden on the world's economy WHO (2011).

Enhancing the use of ICT in PWD communities

The participants made mention of mentorship programs, provision of affordable devices and reliable connectivity as some of the measures that can be taken to enhance the use of ICT in PWD communities. Muchaneta (2023) in the Herald suggest that training of teachers and specialists engaged in education of persons with special needs, development of training and information materials in making educational personnel familiar with best practices and incentivizing them to enhance digital teaching opportunities is also important to bridge the gap found in the use of ICT by people with disability. Mr Ndoro the director of the ministry of

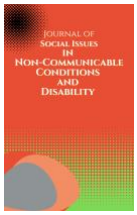
primary and secondary education highlights that there is need to establish a network of resource centres equipped with specialized assistive devices to provide access to information and knowledge for persons with disabilities as well as to train educational personnel on the use of ICTs in special needs education and creation of online platforms that would collect a data base on best practices and case studies on implementation of digital opportunities for teaching people with special needs.

Recommendations

Education and awareness and prioritization of ICT in PWDs communities is highlighted to be very important. Similarly, Muchaneta (2023) suggested that there is need to bring forth awareness of the importance of ICTs to PWDs and their caregivers. Chimuka (2023) also stated that in order to close the gap in the use of ICT by individuals with disability, it is also crucial to train educators and specialists who work with students who have special needs, develop resources for training and information, and provide incentives for educators to improve their use of digital teaching opportunities.

Conclusion

The study illuminated that ICT was understood as a mode of communication using technology like desktops, laptops and tablets, mobile phones, smart phones and smart televisions. It involves ways of accessing information and doing other internet related activities. The use of ICT is important and pivotal in PWD Communities. It provides learning tools, access of information and social support and professional opportunities. However, there are challenges faced by PWD communities in accessing ICTs, these include lack of technological devices and appropriate infrastructure and devices to support PWD and stigma and discrimination. This study highlighted that creating awareness about ICT, advocacy for accessibility, developing partnerships were measures that could be put in place to promote the use of ICT in PWD communities. Mentorship programs, provision of affordable devices and reliable connectivity were perceived as possible ways of enhancing the use of ICTs. The study recommended that education and awareness activities prioritization of ICT in policies and budgets for PWD communities would show the importance and value of ICTs.



Journal of
Social Issues in Non-Communicable Conditions & Disability
ISSN: 2958-5872
(SINCCD)

Volume 3, Number 2, 2024
www.sinccd.africasocialwork.net

References

Addo, M., & Eboh, W. (2014. Qualitative and Quantitative research methods. In R. Taylor (Ed), The essentials of Nursing and Healthcare Research. *SAGE Publications*.

Ayo, C.K. (2009). *Information technology: trends and application in science and business*. Lagos: Concept Publications.

Benda, P., et al. (2011). ICT helps to overcome disabilities. Agris on-line Papers in Economics and informatics.

Bliss, L. (2016). Phenomenological Research: Inquiry to Understand the Meaning of People's Experiences. *International Journal of Adult Vocational Education and Technology*. 7(*3*), p14-26.

Boru, T. (2018). Chapter five research design and methodology 5.1. Introduction Citation: Lelissa TB (2018); *Research Methodology*; University of South Africa, PHD Thesis. DOI: 10.13140/RG.2.2.,21467.62242

Broadband Commission for Digital Development., et al. (2013). The ICT Opportunity for a Disability Inclusive Development Framework. Microsoft

Brunton, K., & Gibson. J. (2009). Staying the Course: The Experiences of Disabled Students of English and Creative Writing.

Buder, S. & Perry, R. (2012). The Social Model of Disability Explained. Social Creatures. https://www.thesocialcreatures.org/thecreaturetimes/the-social-model-of-disability?fbclid=lwAR1CKKDPK8Tz_&format=amp

Caulfield, J. (2019). How to do thematic analysis: A step-by-step Guide & Examples. https://www.scribbr.com/methodology/thematic-analysis/

Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in Education.* Routledge. https://doi.org/10.4324/9780203029053

Creswell, J.W. (2007). Qualitative inquiry and research design: Choosing among five approaches (2nd ed). Sage

Cropley, A. J. (2022). Qualitative research: A practice-oriented introduction. Editura Intalgio Publishing House.

Crossley, J. (2019). *What (Exactly) Is Thematic Analysis? A Plain-Language Explanation & Definition (With Examples*). Grad Coach International. Cadena International Development Projects. (2020). *Education Sector Analysis*. www.cadena-idp.com

Easwaramoorthy, M., & Zarinpoush, F. (2006). Interviewing for Research. Canada Volunteerism Initiative. www.imaginecanada.ca

Eide, A., & B. Ingstad (2013) Disability and poverty – Reflections on research experiences in Africa and beyond. *African Journal of Disability*, 2(1), 1-7. DOI:10.4102/ajod.v2i1.31

Emuakpor, A. O. S. (2002). The impact of information technology in collection development and management in libraries. Information science and technology for library schools in Africa. Madu, E.C. et al. (Eds) Ibadan: Evi-Coleman Publications.

Fochtman, D. (2008). Phenomenology in pediatric cancer nursing research. *Journal of Pediatric Oncology Nursing*, 25(4), 185-192.

Federation of Disabled Persons of Zimbabwe. (2014). The Disability Social Model. http://fodpz.weebly.com/about.html.

Festern, M., & Philbin, M. (2007). Advantages and disadvantages of focused groups, interviews, and pre or post-tests. John Wiley and Sons

Furuholt, B., & Kristiansen, S. (2007). A rural – Urban digital divide? Regional aspects of Internet use in Tanzania. *The Electronic Journal of Information Systems in Developing Countries (EJISDC)*, 3(1), 11 – 15.

Goering, S. (2015). Rethinking disability: the social model of disability and chronic disease. *Curr Rev Musculoskelet Med*. 2015;8(2):134-138.

Hayward, C., Simpson, L. & Wood, L. (2004) Still Left Out in the Cold: Problematizing Participatory Research and Development. *Sociologia Ruralis*, *44*(1), 95-108. https://doi.org/10.1111/j.1467-9523.2004.00264.x

Heath, C. (2023). What is a Semi Structured Interview? Dovetail Editorial Team. https://dovetail.com/research/semi-structured-interview/

Howel, L. (2013). An Introduction to the Philosophy of Methodology. Sage. DOI:10.4135/9781473957633

Information Management Associates. (2021). Research Methods for Information Research. Connect Works. https://www.informat.org/

Kakilla, C. (2021). Strengths and weaknesses of semi structured interviews in qualitative research: a critical essay. *ResearchGate.* DOI:10.20944/preprints202106.0491.v1

Kaaniru, J. (2023). AI Assistive Technologies (Ats) For Persons With Disabilities (PWDS) In Africa. Strathmore University.

Leshota, L. P. (2013). Reading the national disability and rehabilitation policy in the light of Foucault's technologies of power. *African Journal of Disability*, 2(*1*), p 1-7. DOI: 10.4102/ajod.v2i1.41

Marks, D., & Yardley, L. (2004). Research methods for clinical and health psychology. SAGE

Ministry of Information, Communications and Technology. (2019). National Information, Communications and Technology (ICT) Policy.

Muchaneta, C. (2023). Up-to-date ICT for people with disabilities promotes inclusivity. Herald. https://www.herald.co.zw/

Mugimba, C. (2008). ICT Accessibility for Persons with Disabilities in Africa Region: Uganda's Country Report. ITU Regional Workshop on ICT Accessibility for Persons with Disabilities for the Africa Region. International Telecommunication Union.

Namey, E., Guest, G., Thairu, L., & Johnson, L. (2008). Data Reduction Techniques for Large Qualitative Data Sets. In: Handbook for team-based qualitative research. Rowman Altamira.

National Council on disability. (1993). Study on financing of assistive devices and services for individuals with disabilities. https://ncd.gov/publications/1993/mar41993

Omole, D.W. (2013). Harnessing Information and communication technologies (ICTs) to address urban poverty: Emerging open policy lessons for the open knowledge economy. Information technology for development. 19(1), p. 86-96.

Oliver, M., & Bailey, P. (2002). Report on the Application of the Social Model of Disability to the Services. Birmingham City Council.

Okoro, C. A., Hollis, N. D., Cyrus, A. C. & Griffin-Blake, S. (2016). Prevalence of Disabilities and Health Care Access by Disability Status and Type Among Adults — United States. MMWR. 2018;67:882–887.

Palmer, M. (2011). Disability and poverty: A conceptual review. *Journal of Disability Policy Studies*, 21(1), 210–218.

Philipsen, H. and Vernooij-Dassen, M. (2007). Qualitative research: useful, indispensable and challenging. In: Qualitative research: Practical methods for medical practice. In L. PLBJ & H. TCo (Eds.), p5–12.

Plumridge, G., et al. (2012). Involving Interpreters in Research Study. *Journal of Health Services Research & Policy.* 17(3), pp. 190-192.

Raja, S., et al. (2013). How Information and Communication Technologies could help expand employment opportunities. World Bank.

Robson, C. (2002). Real World Research. 2nd Ed. Oxford: Blackwell Publishing.

Samant, D. Matter, R. A. Harniss, M. (2012). Disability and Rehabilitation, Assistive Technology. Research Gate 8(1). DOI: 10.3109/17483107.2012.669022

Samant, D., Matter, R., & Harniss, M. (2013). Realizing the potential of accessible ICTs in developing countries. Disability and Rehabilitation: Assistive Technology, 8(1), 11–20. DOI:10.3109/17483107.2012.669022

Shava, G., & Nlengbeza, D. (2019). Qualitative Research Paradigm: A Design or Distance Education Researchers. Namibia CPD Journal for Educators, 237-258

Spence, R. & Smith, M. L. (2010). ICT, development and poverty reduction: five emerging stories. *Information Technology and International Development*, 6(1), p.11-17.

Taking IT Global. (2013). Disability Culture. http://issues.tigweb.org/disablityculture

Tugli, A. K., Klu, E. K., & Morwe, K. (2014). Critical Elements of the Social Model of Disability: Implications for Students with Disabilities in a South African Institution of Higher Education. *Journal of Social Sciences*, 39(3), 331-336. DOI:10.1080/09718923.2014.11893295. https://doi.org/10.1080/09718923.2014.11893295

United Nations Enable. (2006). Convention on the rights of persons with disabilities. http://www.un.org/disabilities/default.asp?navid=13&pid=150

United Nations. (2012). Information and communication technology (ICT) and disability. Tools kit for disability in Africa. https://www.scribd.com/document/488224621/ICTandDisability

UNESCO. (2021). ICTs for persons living with disabilities. https://en.unesco.org/partnerships/partnering/ict-persons-living-disabilities

UN Enable. (2006). Convention on the rights of persons with disabilities. http://www.un.org/disabilities/default.asp?navid=13&pid=150

WHO & World Bank. (2011). World Report on Disability. WHO Press. https://www.who.int/teams/noncommunicable-diseases/sensory-fynctions-disability-and-rehabilitation/world-reporton-disability

World Health Organisation. (2011). World Report on Disability. Malta: WHO Library Cataloguing-in-Publication Data. https://www.who.int/teams/noncommunicable-diseases/sensory-fynctions-disability-and-rehabilitation/world-reporton-disability

World Health Organisation (2001). The International Classification of Functioning, Disability and Health (ICF)