The role of digital literacy for poverty alleviation in Nigeria

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Abstract - In the 21st century, digital technology has become an integral part of daily life, transforming the way people communicate, access information, and conduct business. Nigeria, like many other developing nations, is experiencing a digital revolution that holds immense promise for alleviating poverty. Digital literacy, defined as the proficiency in using digital technologies and navigating the online landscape, has emerged as a powerful tool in the context of poverty alleviation in Nigeria. This study delves into the critical role that digital literacy plays in addressing poverty and enhancing economic well-being within the Nigerian context. It sheds light on the multifaceted impact of digital literacy, emphasizing its influence on access to education, employment opportunities, and the empowerment of marginalized communities. The study also underlines the existing challenges and the need for effective policy interventions to bridge the digital divide, particularly in the context of a developing nation like Nigeria. By harnessing the potential of digital literacy, Nigeria can work towards not only reducing poverty but also fostering inclusive economic growth.

Keywords: digital literacy; poverty alleviation; employment opportunities; digital divide

I. INTRODUCTION

The world has evolved over the years through different phases that has left the masses constantly having to adapt and keep to the pace of the evolvement in order to stay relevant and adaptive in the new world environment of high significance is the technological evolvement which has left the world grappling with many issues such as development, digital divide, global citizenship, climate change, disaster management, poverty alleviation/eradication, population management, etc. However, humans have, through their adaptive nature to change, learnt to adopt technology to solve their day-to-day major and minor problems through technology and in this case digital literacy. As cited by Anekwe (2022) and Mangal and Mangal (2009) suggest that the contemporary world operates within a knowledge-centric society, where knowledge wields significant influence, fortifies individuals, and enhances both the economic and asset base of a nation. Presently, new knowledge is rapidly proliferating through the means of information and communication technology (ICT), and there exists a fervent desire among people to gain access to these emerging technologies and effectively utilize them to address the manifold challenges facing humanity.

The influence of Information and Communication Technology (ICT) on global innovation is pervasive, encompassing various aspects of life-enhancing activities. These activities span accessing, designing, utilizing, storing, record-keeping, data interpretation, data transmission, manufacturing, trade, monitoring, and information management through diverse technological means to accomplish desired objectives in daily life. ICTs have significantly extended the functions of globalization in numerous domains, including the facilitation of information flows, the generation of capital and ideas, and the advancement of both individuals and products on a global scale. Furthermore, ICT has bestowed additional value upon organizations, businesses, and markets by fostering knowledge acquisition and sharing in the production of goods and services. Consequently, the ultimate outcome is that ICT has empowered individuals to actively engage in economic growth and national development (Anekwe, 2022)

Digital literacy is the knowledge and technical-know-how of the use of information communication technology and its attendant equipment such as software, hardware, computers, etc. Also, Digital literacy signifies an individual's disposition and competence in effectively employing digital tools and devices, utilizing digital resources, acquiring new knowledge, and engaging socially within the emerging digital landscape (Wang et al., 2022)**.** Digital technologies are progressively finding their way into various facets of rural life, encompassing production, ecology, and governance. The incorporation of digital technology applications offers rural inhabitants a range of opportunities and strives to level the playing field regarding access and advantages. Nevertheless, within economic endeavours, there exists an imbalance among rural residents in the advantages reaped from digital progress. Disparities in individual digital literacy often lead to notable variations in their level of participation and the benefits they derive from the digital economy. According to Anekwe (2022), technology in the 21st century era is transforming the globe into a knowledge-based community where information communication technology (ICT) is increasingly providing a global bridge in educational attainment through digital media, capacity building, and sustainable development.

On the other hand, the problem of poverty has been a significant preoccupation for numerous nations globally, particularly those in the process of development. Poverty is commonly characterized as a condition in which an individual cannot sufficiently provide for their fundamental necessities, including food, clothing, and shelter. Additionally, it pertains to the incapacity of individuals to fulfill social and economic responsibilities, the absence of gainful employment, skills, assets, and self-esteem, and restricted access to essential social and economic infrastructure (Obadire, 2022).

The examination of poverty and its mitigation is a well-established practice both within Africa and on a global scale. Numerous African nations have introduced community-centric policies and initiatives as part of their long-standing efforts for economic advancement, state development, economic stability, and industrial competitiveness. Despite these policies and provisions, they remain insufficient, failing to address the dire circumstances of the most impoverished populations, and poverty continues to surge at an alarming rate. The most prevalent method of assessing poverty is said to be founded on income or consumption thresholds. Therefore, an individual is said to be poor if his level of consumption falls below the $1 per day benchmark, which is the minimum required to meet essential needs, encompassing clothing, food, water, shelter, and employment (Obadire, 2022).

Several efforts have been made to mitigate poverty and alleviate it in Africa, and specifically in Nigeria, yet poverty still remains the bane of Nigerians. Rex (2019) observed that in spite of government's programmes and policies over the years, such as Operation Feed the Nation (OFN) under General Olusegun Obasanjo, Green Revolution under Shehu Shagari, Structural Adjustment Programme, under General Ibrahim Babangida and others, Nigeria still wallow in abject poverty. Similarly, Adzu and Babanyaya (2022) examined the National Poverty Eradication Programme (NAPEP) programmes in Nigeria from 2001 to 2020, and found out that the NAPEP schemes have not reduced the rate of poverty in the country due to several identified factors such as Corruption, bad governance, ineffective targeting of the poor, inadequate

funding, the use of 'top down' approach instead of 'bottom up' approach, lack of involvement of the target groups in policy formulation and lack of sustainability mechanisms among others. Ayoo (2022) recommended stimulating economic growth to increase income growth and employment opportunities, reformation of economic and institutional reforms, provision of basic needs of citizens and promoting microfinance growth to promote opportunities to innovation and entrepreneurship, among others.

However, the fact remains that digital literacy holds a great influence in poverty alleviation. Technology has a great potential to create multiple opportunities that can mitigate poverty for Nigerians, yet it is not yet explored as expected, to the best of the researcher's knowledge. This is why this study aims to investigate the role of digital literacy in poverty alleviation in Nigeria. Specifically, the study would examine opportunities in digital literacy for poverty alleviation, challenges of digital literacy for poverty alleviation and provide recommendations for poverty alleviation through digital literacy.

II. DIGITAL LITERACY: A GATEWAY TO OPPORTUNITIES FOR POVERTY ALLEVIATION

In today's increasingly interconnected world, digital literacy has emerged as a crucial tool for empowering individuals and communities to break the cycle of poverty. Digital literacy holds immense opportunities for the alleviation of poverty in Nigeria. The skills acquired through digital literacy are skills that are geared towards self-reliance, wealth creation, therefore, poverty alleviation. By equipping individuals with the skills to effectively utilize digital technologies, digital literacy programmes can open doors to a wide range of opportunities, fostering economic growth, social inclusion, and overall well-being.

Digital literacy serves as a foundation for economic empowerment, enabling individuals to access and navigate the digital marketplace. With digital skills, individuals can engage in online job searches, connect with potential employers, and even start their own businesses. A study by the World Bank found that a 10% increase in broadband penetration can lead to a 1.38% increase in GDP growth (Qiang et al., 2009). This highlights the potential of digital literacy to stimulate economic activity and alleviate poverty.

In addition, Digital literacy opens up avenues for education and skills development, providing individuals with the tools to enhance their knowledge and capabilities. Digital literacy empowers individuals to access online educational resources, including massive open online courses (MOOCs) and vocational training programmes. Such access can provide the skills needed for better employment prospects and income generation. Also, Online courses, tutorials, and resources offer affordable and accessible learning opportunities, enabling individuals to acquire new skills and improve their employability. A study by UNESCO found that digital literacy programmes can lead to significant improvements in employment rates and earnings (UNESCO, 2018). Similarly, Digital literacy initiatives can help bridge the digital divide, ensuring that marginalized communities are not left behind in the digital age. By providing access to technology and training in digital skills, these initiatives can empower individuals to participate fully in society, access essential services, and connect with others. A study by the UN found that digital inclusion can contribute to poverty reduction and social inclusion (UN, 2016).

Furthermore, Digital literacy empowers individuals and communities to take control of their own development. With digital skills, individuals can access information, make informed decisions, and advocate for their needs. This can lead to greater self-sufficiency, improved decision-making, and increased participation in community development initiatives.

Digital literacy serves as a gateway to opportunities for poverty alleviation, enabling individuals to participate in the digital economy, access education and skills development, and engage in social and civic activities. It is a gateway to economic opportunities. It enables individuals to participate in the digital economy, access online job marketplaces, and engage in remote work or freelancing. These avenues can significantly augment their income and help lift them out of poverty. In addition, Nigeria's digital space offers tremendous potential for entrepreneurial ventures. With digital literacy, individuals can start and manage online

businesses, tapping into e-commerce, digital marketing, and other digital tools to reach a broader customer base. It is worth noting that many government services in Nigeria are moving online, from the old normal of terrestrial operations. By investing in digital literacy programmes, governments, NGOs, and communities can empower individuals to break the cycle of poverty and create a more equitable and inclusive society.

Digital literacy is the foundation upon which individuals can access the wealth of information, services, and opportunities available in the digital age. It encompasses the skills and knowledge needed to navigate the digital world, from basic computer operations to more advanced skills like online research and cybersecurity. Therefore, digital literacy has become very crucial for citizens to access services like healthcare information, social safety net programmes, and government subsidies efficiently.

In addition, Apata (2021) observe that with the rapid expansion in the field of Information Communication Technology (ICT) in the past few decades and its expanding effect on the evolving of the *net generation*, the traditional conception of literacy would no longer be enough to capture the concept due to the fact that the generation Z learners live in a digital ecosphere, since they have grasped the art of using technology to solve their immediate needs and problems, through their early exposure and interaction with digital technologies. By implication, it means the possession of digital literacy skills can help individuals to fed for their needs and also be able to live above poverty level, through the application of the skills to earn a living.

Furthermore, Prayitno et al (2022), emphasize the significance of digital literacy in enhancing household economic welfare in the contemporary era. They argue that digital literacy has evolved into a necessity for individuals to adapt to the rapid advancements in information and communication technology (ICT). ICT, in their view, plays a pivotal role in facilitating the creation, transmission, and manipulation of information, thus rendering these processes more convenient and cost-effective. Furthermore, they assert that ICT holds a unique position as a source of information due to its ability to provide information at a more affordable cost. To illustrate this, they provide the example that a housewife who is equipped with digital literacy skills, can participate in online business activities, which can substantially contribute to the financial well-being of the family. Previous research, as noted by them, has also highlighted the potential of digital literacy to enhance the welfare of the general populace, with a specific focus on the Indonesian population, in their study.

Anekwe (2022) noted that in terms of employment, Information and Communication Technologies (ICTs) provide opportunities for young people, helping them increase their income and break free from the cycle of poverty, which had hitherto bedeviled the socio-economic lives of the citizens. He noted that a significant number of university graduates, who were previously struggling to find traditional employment, have now found stability and reasonable income by engaging in various ICT-related activities. Many of these individuals have gone on to establish their own ICT businesses, becoming employers themselves. Furthermore, those graduates who have ventured into ICT have diversified their activities into small businesses, including phone call centers and the sale of phone accessories and related products. The ongoing technological revolution has presented considerable challenges, yet it is widely embraced by individuals from all walks of life. Its impact on overall economic productivity and poverty reduction is noticeable across various sectors of the economy and society as a whole. Examining the growing issue of unemployment in the economy, the government has taken steps to address the situation by utilizing the National Information Technology Development Agency (NITDA) as a means to alleviate the problem (Anekwe, 2022).

Sustainable poverty reduction is improbable without the effective utilization of Information and Communication Technologies (ICT). To facilitate poverty reduction through ICT, it is essential for the Nigerian government to recognize its pivotal role as a major employer and user of ICT. This recognition should be coupled with a commitment to development strategies aimed at poverty alleviation. Furthermore, establishing and providing access to social networks through affordable ICT solutions and telecentres can significantly improve the

impoverished population's timely access to accurate and reliable information. ICTs not only have the potential to empower all genders but also to ensure the sustainability of poverty alleviation programmes, which have historically faced challenges in Nigeria. By offering new and enhanced opportunities for individuals to participate in self-determination, as well as in economic, social, educational, and cultural advancement, ICTs extend the scope of employment beyond traditional institutions and governance structures (Obayelu & Ogunlade, 2006).

According to Sofowora (2009) in his study, individuals who were formerly jobless and devoid of any income source are currently earning daily incomes ranging from N500 to N3000 through engagement in micro-business activities associated with street telephony systems using mobile phones. The findings indicate that mobile devices and Information and Communication Technologies (ICTs) have delivered more developmental and economic advantages to the youth population in the state compared to any other facet of the SEEDS program. Furthermore, these technologies have played a significant role in mitigating poverty, lowering the rates of unemployment, and quelling youth unrest within the state.

Raji et al (2006) found that in Nigeria, around 70.2% of the population lived below the poverty line (less than US$1 per day) in 2000, with an inflation rate of 19.9% in 2004. They emphasized the potential of ICT in offering diverse employment opportunities and its role in enhancing poverty eradication by improving efficiency and access to information. ICT was seen as a tool for promoting freedom and democracy and had the potential to drive economic growth, especially in developing nations.

Lechman and Popowska's (2022) research indicates that the expansion of ICT usage, rising school enrollments, and increased material wealth play a crucial role in alleviating poverty in developing nations. Nevertheless, the effects of digitalization on poverty reduction are not instantaneous or straightforward. Therefore, it is asserted that both national and local governments, in collaboration with civil society, should incorporate ICT as a fundamental component of their comprehensive development approaches.

Digital literacy is the ability to use digital technologies to access, understand, and create information. It is an essential skill for success in today's world, where digital technologies are used in all aspects of life, from education and employment to healthcare and government services. Poverty is a complex problem with many causes, but digital literacy can play a significant role in poverty alleviation. By empowering people with the skills to use digital technologies, they can access new opportunities for education, employment, and entrepreneurship. Therefore, Digital literacy is an essential skill for success in today's world, which can play a significant role in poverty alleviation by empowering people with the skills to access new opportunities for education, employment, and entrepreneurship. Governments, businesses, and non-profit organizations can all play a role in promoting digital literacy and in making sure that everyone has the opportunity to benefit from digital technologies.

III. CHALLENGES AND FUTURE DIRECTIONS

Despite the numerous benefits that digital literacy has to offer in order to alleviate or eradicate poverty in Nigeria, several challenges have been found to be bedeviling it.

Here are some of the key challenges: (a) Lack of access to digital technologies: Many people living in poverty do not have access to digital technologies such as computers, smartphones, and the internet. This can make it difficult for them to benefit from digital literacy opportunities. (b) The digital divide is the gap between those who have access to information and communication technologies (ICTs) and those who do not. It can also be defined as the gap between those who have the skills and knowledge to use ICTs effectively and those who do not. The digital divide can be seen in a number of different ways, including:

Access: This refers to the physical availability of ICTs, such as computers, smartphones, and the internet. People living in rural areas and people with low incomes are more likely to lack access to ICTs.

Skills: This refers to the ability to use ICTs effectively. People with less education and people with disabilities are more likely to lack digital skills.

Usage: This refers to how often and how effectively people use ICTs. People with high incomes and people with higher levels of education are more likely to use ICTs frequently and effectively.

The digital divide has a number of negative consequences. People who lack access to ICTs and digital skills are at a disadvantage in all aspects of life, including education, employment, and healthcare. They are also less likely to participate in civic and social life.

- Lack of digital skills: Even among those who have access to digital technologies, many people lack the digital skills needed to use them effectively. This can be due to a number of factors, such as inadequate education and training, lack of motivation, and/or cultural barriers.
- High cost of digital technologies: Digital technologies can be expensive, especially for people living in poverty. This can make it difficult for them to afford the devices and services they need to benefit from digital literacy opportunities.
- Lack of digital infrastructure: Many rural and poor communities lack the digital infrastructure needed to support digital literacy programs and initiatives. This can include things like access to high-speed internet and reliable electricity.

Future Directions

In order to address the challenges of digital literacy for poverty alleviation, it is important to focus on the following explanation.

- **Expanding access to digital technologies:** Governments and businesses need to work together to make digital technologies more affordable and accessible to people living in poverty. This can be done through a variety of initiatives, such as providing subsidies for devices and services, and investing in digital infrastructure in rural and poor communities.
- **Improving digital literacy skills:** Governments and non-profit organizations need to invest in digital literacy training programs for people of all ages. These programs should be tailored to the specific needs of different groups, such as women, youth, and people with disabilities.
- **Promoting digital inclusion:** Governments and businesses need to work together to create a more inclusive digital economy. This can be done by developing policies and programs that support digital entrepreneurship and job creation in the digital sector.

IV. CONCLUSION

Digital literacy has the potential to play a significant role in poverty alleviation, but it is important to address the challenges that exist. By expanding access to digital technologies, improving digital literacy skills, and promoting digital inclusion, we can create a more equitable and prosperous world for all.

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