Digital Skill Acquisition: A Key Strategy for Poverty Alleviation in Nigeria

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ABSTRACT

Poverty is a menace, cancerously eating deep into the length and breadth of the Nigerian economy. Despite many poverty alleviation programs that have been floated by past and present administrations, Nigeria is still in the first 40 poor countries in the global scene. Hence, this paper investigates the potential of digital skill acquisition as a complementary strategy for poverty alleviation in Nigeria. While successive poverty reduction programs have had limited impact, the digital economy offers new pathways for employment, innovation, and inclusion. The study explores the limitations of existing poverty alleviation schemes, and proposes a framework for implementing inclusive digital skill programs. As the nations of the world are currently channeling their energy towards technology, digital skills have become a highly sought acquisition because of its ability to grow economy at any level. Its roles and gains cut across organizations and individuals, to nations. Therefore, it is important Nigeria adopts digital skills acquisition programs as a veritable strategy for poverty alleviation in the country.

Keywords: Poverty alleviation, internet technology, digital skills

INTRODUCTION

Poverty refers to a state of lack or insufficiency of livelihood. It is the insufficiency of resources that an individual or country needs to make life easy. And it cuts across all forms of resources – materials, land, and others. United Nations [UN] (n.d) opines that poverty entails more than the lack of income and productive resources to ensure sustainable livelihoods. Its manifestations include hunger and malnutrition, limited access to education and other basic services, social discrimination and exclusion as well as the lack of participation in decision-making. Various social groups bear a disproportionate burden of poverty.

More so, Poverty is a global phenomenon. It is not new to the nations of the world. The world acknowledges what poverty is all about, its impact, and the need to eradicate it. Hence, the United Nations came up with the 17 sustainable development goals (SDGs) for the transformation of the people and countries of the world that are living in poverty of which "No Poverty" tops them all.

Also, poverty is relative – personal or national. However, poverty culminates in a lack of one thing, money. And, a poor enabling environment, bad governance, unequal distribution of sound education and many more are underlying factors that cause poverty in a country.

The effects of poverty are adverse: it affects both the young and adults, the society, and its economy and security. Children living in poverty often face the problem of hunger, labor to assist their poor parents, poor childcare and healthcare, sub-standard housing, and poor education. Most times, these children develop problems that concern their emotions, psychology, health, and poor nutrition, among many others.

The social impact of poverty includes high infant mortality and annual death rate, increase in hygiene and diet-related diseases, for example, cholera, dysentery, tuberculosis, etc., increased crime rates as people become desperate to survive in the face of poverty, and increased rate of homeless people. As poverty sets in, more and more people face greater financial woes - those who already have a roof over their heads may experience difficulty paying rent to their landlords, and those without homes cannot afford a home. This will greatly affect

the nation's tourism trade - A Street full of beggars and homeless vagabonds is but an eyesore to tourists, Poverty at Large: a Dark Spot in Humanity (Povertyhci, n.d.).

More so, adults who are living in poverty eventually face problems of unemployment, low-paying jobs, alcoholism, drug abuse, cultism, and criminality. There is also tension in a society where poverty is predominant: The society or country faces problems of insecurity, kidnapping, and economic meltdown. Nigeria is a typical example.

The feature of a rich or developed country for example is the presence of a middle class, but recently we've seen even Western countries gradually losing their middle class, hence the increasing number of riots and clashes. In a society, poverty is a very dangerous factor that can destabilize an entire country. Effects on Poverty on Society, Health, Children and Violence (Restless Stories, 2011).

As a result of the pervasive impact of poverty on individuals and consequently countries, nations of the world have continuously come up with lots of poverty alleviation programs with the intent of eradicating its effects. In Nigeria, we have had a handful of poverty alleviation programs marshaled out by mostly the government. These programs include m-power, educational schemes, etc.

But, have these poverty alleviation programs brought a significant positive shift in the poverty level in the country? Your answer is as good as mine – No.

Poverty is a multidimensional problem affecting income, access to essential services, education, and overall human dignity. Despite the various government-led initiatives since Nigeria’s independence, the poverty rate remains high, making the need for sustainable solutions urgent. With the global digital revolution, digital skills have emerged as critical drivers of individual empowerment, economic inclusion, and job creation. This paper seeks to explore how digital skill acquisition can be systemically harnessed to improve livelihoods and alleviate poverty in Nigeria.

This paper is structured as follows: Section 1: Introduction. This section offers an interesting insight into poverty and what impact it creates. Section 2: Theoretical Framework. Section 2 provides more insight into poverty, the need for poverty alleviation strategies, and a brief summary of some key alleviation programs done in Nigeria to date. It also gives insight into what digital skills actually entail, reasons the Nigerian government should leverage digital skills’ capabilities for poverty alleviation, at the both individual level and the country, and their strategies for the implementation of digital skills as a viable poverty alleviation program in the country. Sections 3 and 4 are for Summary and Conclusion. Section 5 gives the Recommendation.

Theoretical Framework

This paper draws on Human Capital Theory (Becker, 1964), which posits that skills and education investments enhance productivity and income. Essentially, it views these factors as forms of capital, similar to physical capital like machinery, that can be improved through investment and yield returns in the form of higher earnings. In the context of digital skills, individuals with competencies in basic computer operations skills, data analytics, design, and software engineering can gain access to local and global markets. The Technology Acceptance Model (TAM) (Davis, 1989) is also applied to understand how perceived usefulness and ease of use affect technology adoption among poor populations. To explain how individuals decide to engage with digital skill acquisition programs, this study draws on the Technology Acceptance Model (TAM) developed by Davis (1989). TAM suggests that two main factors—perceived usefulness and perceived ease of use—determine whether a person adopts a technology. In the Nigerian context, individuals are more likely to pursue digital training when they believe it will lead to economic improvement and when training platforms are accessible and user-friendly. Thus, any large-scale digital skill initiative must consider how these perceptions shape adoption, particularly among marginalized groups with low digital exposure.

Poverty and the need to eradicate it in Nigeria

Poverty is a global socio-cultural phenomenon usually examined from an economic perspective. (Adamkovic and Martoncik, 2017). It is a complex construct of factors such as income insufficiency, lacking resources to

ensure dignified living, experiences of hunger, aggravated health and poor healthcare, limited access to education, improper housing conditions, and social discrimination, (United Nations [UN], 1995). However, these definitions remain rather ambiguous and open to questioning. For example, how might one define "dignified living"? What exactly might improper housing constitute? Where the line might be drawn between the availability of food being accessible or limited? Poverty, therefore, appears to be a multidimensional construct which presents itself with various aspects that can be assessed both on an individualistic (subjective) level, as well as objectively, based on more general predefined criteria, (Adamkovic and Martoncik, 2017).

There is great concern among stakeholders that the gap between developed and developing countries is not narrowing but rather continually widening. The majority of the world's population in the developing world lives in abject poverty, which has worsened the problem of urban population explosion, rural stagnation, unemployment, and growing inequalities. These challenges continue to face less developed countries (LDCs), of which the Federal Republic of Nigeria is one. Unfortunately, Nigeria is still grappling with the processes required to engender meaningful development despite her huge national resources endowments. This has intensified the advocacy for policies and commitments toward bringing about sustainable wealth creation in the Nigerian economy. National development is critical to the growth and sustenance of any country; hence Lawal and Oliwatoyin (2011) contend that the attainment of meaningful national development would only be successful if effective wealth creation strategies are evolved, Edem (2018). Hence, the Sustainable Development Goal of the United Nations to eradicate poverty from the world by the year, 2030 is a show of their resilience to bring individuals and nations living in poverty to a "No Poverty" level.

Therefore, poverty alleviation aims to improve the quality of life for those people currently living in poverty, Wutofeh (2021). The quality of life of people is considered below average, hence, poor when they cannot afford a meaningful livelihood. For instance, people are said to live in poverty when they cannot afford a good shelter, good education, healthcare, and a sustainable income. Poverty alleviation is also the process and technique of building a strong financial base that leads to wealth. The process and technique include time, strategies, tools, and technical know-how. Also, it might be a manual process or would require information technology: It involves ventures that transform human efforts into money. According to Wikipedia ("Poverty Reduction," 2021), poverty alleviation "is a set of measures, both economic and humanitarian, that are intended to permanently lift people out of poverty". Oviasuyi (2020), Poverty alleviation refers to all the methods, ways or techniques adopted by government, non-governmental organizations or wealthy individuals to reduce or eradicate poverty from a collectivity.

Hence, it is important to note that an individual that does not make a concerted effort to alleviate poverty eventually falls back to borrowing to survive. And borrowing does more harm than good, just as in the case of Nigeria. "Nigeria's public debt stock stood at N44.06 trillion ($101.91 billion) in the third quarter of 2022, the National Bureau of Statistics has said", Izuaka (2023). And it has certainly increased as at the time of writing this paper.

In words of Oviasuyi (2020), the Poverty alleviation/eradication is best approached as an exercise in raising people's capabilities or enhancing freedoms. The corollary of this approach to development is empowerment, which is, helping people in poverty to acquire the tools they need to meet their basic needs as the long-term solution to poverty.

Assessment of Nigeria's Digital and Poverty Alleviation Programs: A Critique of N-Power and Related Initiatives

As earlier established, the Nigerian government has implemented several digital and poverty alleviation programs to arrest the high level of unemployment, poverty, and digital exclusion across the country. But while these initiatives, particularly N-Power, Digital Nigeria (launched in 2020 to focused on enhancing ICT capacity building through online platforms), and Youth Empowerment programs such as National Social Investment Programme (NSIP) – a broader initiative encompassing N-Power, GEEP (Government Enterprise and Empowerment Program), Conditional Cash Transfers (CCT), and Home Grown School Feeding (HGSF), which are among the most prominent recent interventions have recorded some successes, they are also beset with systemic flaws that have limited their impact.

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N-Power Program: Successes and Gaps

N-Power program registered the following successes:

i. By 2022, N-Power had enrolled over 500,000 beneficiaries in various streams (N-Power Teach, N-Power Agro, N-Tech, N-Creative).
ii. Beneficiaries received ₦30,000/month stipends and many gained short-term teaching and technical experience.
iii. N-Tech and N-Creative modules empowered youths with web development, animation, and digital skills.

However, the following are observed gaps which affected its expected positive impact.

i. Short-term Nature: Placements lasted only 1–2 years with limited pathways to sustainable employment.
ii. Payment Delays: Frequent non-payment issues reduced trust in the scheme.
iii. Urban Bias: Most digital trainings were urban-centered as a result of the lack of infrastructure in rural zones.
iv. Weak Monitoring: Evaluation reports (BudgIT, 2021; ActionAid, 2022) reported the absence of structured exit monitoring or follow-up employment tracking.

Digital Nigeria Programme: Gaps in Accessibility

Yes, Digital Nigeria provides free online courses in data science, digital literacy, and cloud computing but it has the following accessibility gaps that need bridging:

i. Online-Only Format which excludes people who have no stable internet or smart devices.
ii. Language and Usability which bring about the problem of alienating non-English speakers (because the training modules are English-based) and non-mobile friendly users.
iii. Completion Incentives: The lack of recognized certification or mentoring discourages course completion.

Comparative Insight: India's PMGDISHA vs. Nigeria's N-Power

India's Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA) offers a compelling model for inclusive digital skills training in underdeveloped regions. The programme is implemented through Common Service Centres (CSCs)**,** which are solar-powered and managed by Village Level Entrepreneurs (VLEs)—local facilitators who deliver content in their different regional languages and dialects, thereby enhancing accessibility and trust (Smile Foundation, 2022; Wikipedia, 2023). In this way, the offline-first orientation of CSCs allows training to continue even in areas with unreliable connectivity or electricity, a strategy we strongly believe that can benefit rural communities in Nigeria.

More so, PMGDISHA's model emphasizes community engagement**,** localized pedagogy**,** and a robust post-training certification process**,** which has led to the digital certification of over 6.3 crore rural Indians as of March 2024. Ethnographic research further supports the program's effectiveness in tailoring training to local contexts, especially among marginalized rural populations (PIB, 2024; Sundararajan and Rao, 2023; Sharma, 2022). This stands in contrast to Nigeria's urban-skewed digital initiatives and highlights the value of decentralizing program delivery through solar-enabled ICT hubs and local-language trainers.

Summary Assessment of the Poverty Alleviation Programs in Nigeria

Poverty alleviation programs are common in almost every government that emerges in Nigeria since independence. Each comes up with its own poverty alleviation scheme that is perceived to be better than the previous one and would in turn reduce poverty in the country. However, these poverty alleviation programs come in diverse forms depending on the target of the government. The target could be for rural development, economic growth, basic needs, or specific needs. Some of the poverty alleviation programs which the federal government has come up with over the years based on their target areas include:

i. **Better Life Program for Rural Dwellers (BLP) and Family Support Programme (FSP)**: BLP was created by the late wife of former President Babangida, Maryam in 1987. It was for rural development; hence, targeted only widows, orphans, aged people, and disabled people. The FSP was created especially for women in rural areas.

ii. **People's Bank of Nigeria (PBN):** PBN also came into existence during the General Babangida administration. It was created for rural development. Micro-loans were given to rural women and the urban poor.

iii. **The National Directorate of Employment (NDE):** NDE was established by the General Babangida administration. And it was created for specific needs which was to fix unemployment among the youths. Small Scale Enterprises (SSE) programme, Vocational skills development programme (VSDP), Special Public Works Programme, etc were programs created in NDE to reduce poverty.

iv. **Family Economic Advancement Program (FEAP):** FEAP was the creation of Maryam Abacha in 1998. It was created for economic growth by giving loans to people (families), poultry production, animal husbandry, garri production, and soap production. The target area of the federal government with this program was the families. As the name implies, this program was aimed at supporting and improving the economic status of families.

v. **The Poverty Alleviation Programme (PAP):** PAP was created in the year, 2000 during Chief Olusegun Obasanjo administration. It was set up for both economic growth and specific needs created to fix unemployment among the youths. Small Scale Enterprises (SSE) programme, Vocational skills development programme (VSDP), Special Public Works Programme, etc were programs created in NDE to reduce poverty.

vi. **National Poverty Eradication Programme (NAPEP)**: NAPEP started in the year 2001 and focused on the economic and specific needs of youth unemployment. Although, it also touched rural development, for the sake of youth unemployment. It began in the year, 2001, and was focused on preventing absolute poverty. NAPEP gave rise to the following schemes, Social Welfare Services Scheme (SOWES), Youth Empower Scheme, Youth Empowerment Scheme (YES), Natural Resources Development and Conservative Scheme (NRDCS), and Rural Infrastructure and Development Scheme (RIDS).

vii. **The Millennium Development Goal (MDG):** Nigeria adopted the United Nation's MDG in the year, 2005 with the sole aim of eradicating poverty in the country. And the first goal of this scheme is "Eradicate extreme poverty and hunger".

viii. **N-power Programme:** This program is among the latest program (2016) and was carried out by President Muhamadu Buhari-led administration. It was geared toward youth unemployment and economic growth.

These and more poverty alleviation programs impacted the country's economy and development. However, their collective impact has not been able to elevate Nigeria out of the list of poverty-stricken countries. Research shows that from the world population review for the year, 2023, Nigeria is the 37th country in the world with a high rate of poverty with a 40.1% rating. Political will and commitment, unstable policy, poor involvement of the target beneficiaries due to loss of interest and faith in the government, lack of proper orientation, poor funding of the agencies or directorates in charge of the programs, hijack of a program itself, its fund and other resources meant for it by some greedy individuals, among many other factors have contributed to the inefficiency of Nigeria's poverty alleviation programs till date.

Can Digital Skills Leverage Poverty Alleviation in Nigeria?

Digital skills can have a profound impact on the economy, generating trillions of dollars in global GDP. A report by Gallup and Amazon found that digital skills can generate $18.5 trillion globally, with enterprises that use digital skills reporting 168% higher annual revenues than those that don't. Moreover, workers with advanced digital skills can earn up to 30% more than those without digital skills, adding to their job satisfaction and productivity; Eke et'al (2025). Therefore, the federal government of Nigeria can leverage Digital skills for poverty alleviation in the country if it provides an enabling environment. Digital Skills will certainly help to improve the financial status of those who learn it and in turn improve the economic status of the nation. This assurance does not concern individuals living in the country only but, extends to industries as well. According to Eke et'al (2025), "Acquiring digital skills can contribute significantly to Nigeria's

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economic growth by increasing productivity, innovation, and competitiveness in various industries. In today's rapidly evolving economic landscape, Nigeria's industries face significant challenges in remaining competitive and relevant. The acquisition of digital skills has become a crucial factor in determining industry relevance." This assertion suggests that the economy of industries would eventually crash in the absence of digital skills.

The term 'developed country' is often used to describe a sovereign state that possesses a mature economy and a technologically advanced infrastructure, (World Population Review, 2023).

Therefore, a growing country or individual is such that grows along with the growing trend at the global level. And technology is the order of the day: it grows and finds relevance in virtually every human endeavor. It has become a measuring stick for a country's development at the global level because of the advent of internet technology which has become the bedrock of emerging technologies cum economic development. Internet technology is fast growing and there is a great demand for every individual and nation, including Nigeria to embrace it and its products in its length and breadth. *We should strive to garner much knowledge about aspects and products of internet technology and how to use or apply them; hence, digital skills.*

Digital skills are defined as the ability to find, evaluate, use, share, and create content using digital devices, such as computers and smartphones, UNLV Continuing Education ("What Are Digital Skills?", 2022).

It entails one's ability to surf the internet, safely communicate, create content, and transact via the internet (online). It is the capability of a person to use technologies and the internet to carryout out tasks. These tasks or projects are services that can be rendered to businesses or organizations, which range from the development of websites and mobile apps, graphics- and video editing and production, designing and production of brand identity, creation of brand awareness, screen sharing, google spreadsheet data presentations, content strategy creation, copywriting, data visualization, search engine marketing, identifying pain points using data analysis, to more advanced roles and services. Hence, there is a need for professionals with basic digital skills.

More so, research has it that "there are roughly 500,000 new internet users every single day", (Flynn, 2023). And Internet users do not refer to individuals only but to businesses or organizations.

Therefore, the following are reasons Nigeria can leverage digital skills for poverty alleviation in the country:

a) **There is a high demand for professionals with digital skills in Nigeria because of the increasing number of businesses and their presence on the Internet**: Nigeria is a country open to many businesses. Regularly, Startups emerge also. And most of them have gone "e" (that is electronic or online) which in turn populates the internet community and requires the services of more digital skills professionals.
b) **Digital skills are open to everyone:** it does not necessarily need someone to own a certificate in Computer Science. Despite one's area of study, the knowledge and application of digital skills know no bounds. Anyone with basic knowledge of computers and or mobile devices, as well as anyone who can read and or write, can acquire digital skills.
c) **Application of Digital Skills can serve as a supporting business:** Given that a digital skills professional can work remotely, working as a digital skills professional, therefore, can be taken as supplementary.
d) **Digital skills services pay well:** Digital skills professionals are paid well. These days, they are paid in dollars. And the amount that is paid is dependent on one's skills, number of pages, amount of time, etc. Hence, digital skills can be a sustainable livelihood.
e) **Digital skills can be engaging:** Hence, it has the capability to keep anyone, especially our youths busy and focused on something reasonable and financially gainful. Many of our youths engage in the dubious business which they call "Yahoo" business. This practice sustains criminality and not a livelihood. But, digital skills would be both reasonably engaging and sustaining.

How can the Nigerian Government leverage digital skills for poverty alleviation?

Over the years, the Nigerian government has come up with a lot of poverty alleviation programs that have helped in one way or the other. However, it is obvious that those programs always met roadblocks. The

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problem of undue political influence from greedy and selfish politicians, poor strategies and administration, poor funding, and so on has bedeviled the programs to date. And that is why Nigeria has remained in the top-ranked poor countries in the world.

However, having seen the reasons Nigeria should embrace digital skills as a panacea to poverty in the country, the following are ways the Nigeria government can leverage it:

i. Create a nationwide awareness of the relevance Digital Skills acquisition: If people do not perceive digital tools as useful (PU) or easy to use (PEOU), they are unlikely to adopt them—even if training is available. Recall that Technology Acceptance Model TAM (Davis, 1989) is key to achieving this first phase. The TAM explains how users come to accept and use a technology, based on two key perceptions:

a) Perceived Usefulness (PU): the degree to which a person believes that using a particular technology will enhance their job or life performance. Jobberman (2021) opined that youths are more motivated to adopt digital training when they see economic benefit. For example, 68% of learners enrolled in digital courses on platforms like Jobberman or GADS reported that employment potential was their primary motivator.

b) Perceived Ease of Use (PEOU): the degree to which a person believes that using the technology will be free from effort. For instance, training courses that are mobile-friendly, available in local languages, or require low data will be more accessible than the ones with technical jargons and complex navigation, especially among low-literacy learners.

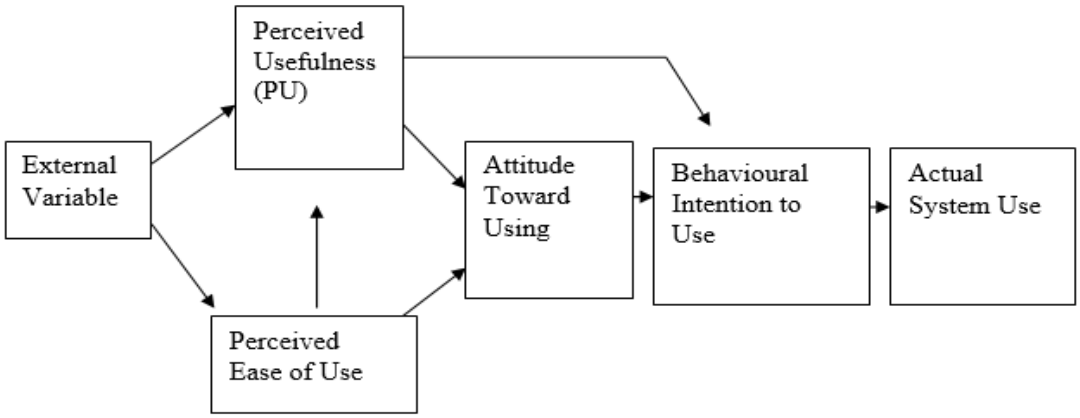

Figure 1: Technology Acceptance Model (TAM)

Other behavioral detail exploring user motivations and challenges per TAM model include,

a. Attitude Toward Use (ATU): Positive attitudes are always linked to the previous digital exposure such as mobile banking, and WhatsApp. Hence, using familiar tools like WhatsApp to introduce training increases trust and engagement.
b. Behavioral Intention to Use (BIU): The "intent to use" is strongly influenced by culture and gender. For example, in Northern Nigeria, women may have low intent to join even when PU and PEOU are high due to cultural restrictions (GSMA, 2022).

Therefore, the classic TAM sequence is as follows,

PU + PEOU → ATU → BIU → Actual Use.

And if learners perceive digital skills as,

1. Useful for income (PU)
2. Easy to learn and apply (PEOU)
3. Culturally acceptable and confidence-boosting (ATU), they will be more likely to engage with and benefit from such programmes (BIU → Usage).

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Hence, a strong and nationwide awareness campaign is pivotal to government's strategy because many individuals in poverty-stricken areas may be reluctant to engage with digital technologies due to:

(1) Lack of exposure
(2) Fear of complexity
(3) Poor infrastructure

i. Encourage the integration of Digital Skills into our education curricula and make it a compulsory program for all undergraduates. And the Programs must **emphasize the usefulness** of digital skills (e.g., job opportunities, entrepreneurship).
ii. Set up or encourage IT/Digital Skills Training Centers in order to run the Digital Skills Empowerment program. And the Training delivery must be **simple, relatable, and culturally contextual** to boost perceived ease of use.
iii. Collaborate with privately owned IT/Digital Skills Training Centers to ensure the training of interns.
iv. Establish a Digital Skills Empowerment scheme: This scheme would ensure the setting up of IT/Digital Skills Training Centers. The training centers could be sited in tertiary institutions or elsewhere. The scheme could also ensure that the federal government can collaborate with privately owned IT/Digital Skills Training Centers in order to train interested members of the community. More so, the nature of the Digital Skills profession is such that one can either choose to be a freelancer – working remotely, or own an IT business. Thus, Digital Skills might cost an intern a training fee only. Therefore, the scheme would ensure the sponsoring of the training of interns, and startups.
v. Create a proper awareness campaign for all Nigerians: Digital Skills does not select gender, age, or status. It is s growing technological area that improves the financial status of anyone who knows.

Empirical Analysis of Digital Skills Training Outcomes in Nigeria

The efficacy of digital skill acquisition is a tool for poverty alleviation in Nigeria**,** providing employment, income improvement, entrepreneurship, and upward social mobility among Nigerian populations. The federal government of Nigeria through the Ministry of Communications and Digital Economy, in 2020 came up with policy framework to build a digital Nigeria. Nigeria's National Digital Economy Policy and Strategy (NDEPS) 2020–2030 identifies 'Digital Skills' as one of its eight foundational pillars. The policy, launched by the Federal Ministry of Communications and Digital Economy, targets equipping 70% of Nigerians with basic digital literacy by 2030 (NDEPS, 2020). They stated that their vision is to transform Nigeria into a leading digital economy providing quality life and digital economies for all. And the National Information Technology Development Agency (NITDA) has played a significant role in executing this vision. For instance, under its Digital Economy Employability Programme (DEEP), over 200,000 Nigerians were trained in basic and intermediate digital skills by 2023 (NITDA Annual Report, 2023). These include modules in digital marketing, data management, basic coding, and cybersecurity.

Survey-Based Empirical Evidence

The multiple survey-based studies reinforce the linkage between digital skills acquisition and improved livelihood outcomes. For instance, the Jobberman Nigeria Digital Skills Report (2021) surveyed 1,200 youths from age 18 to 35 across Lagos, Abuja, and Kano. The findings include:

i. 60% of respondents who completed a structured digital skills course found employment within six months.
ii. 30% started freelance careers using platforms like Upwork and Fiverr.
iii. Average income among digitally-skilled respondents was 2.3x higher than their peers without training.

Table 1: Employment Outcomes by Digital Skills Status (Jobberman, 2021)

Group	Employment Rate (%)	Average Monthly Income (₦)
Digitally Trained Youth	72	105,000
Non-Digitally Trained Youth	38	45,000

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Case Study: Google Africa Developer Scholarship (GADS)

Since 2019, the GADS program has trained over 100,000 Nigerian youth in software engineering, mobile development, and cloud technologies. The initiative is a collaboration between Google, Pluralsight, and Andela.

An internal impact assessment report (Google Impact Report, 2023) revealed that:

i. 41% of GADS graduates secured employment within 9 months.
ii. 57% reported higher self-confidence in career decisions.
iii. Participants cited better negotiation power for salaries and better job placement opportunities.

Case Study Illustration: Andela Nigeria and the Rise of Remote Digital Employment

In 2014, Andela launched as a digital skill accelerator in Nigeria, recruiting and training software engineers for global remote employment. By 2021, Andela had placed over 1,000 Nigerian developers in remote jobs with international firms. Many of these participants reported a 5-10x increase in income compared to their previous earnings.

Drawing on the IFC case study (2022), we see that Andela's model of intensive training followed by placement in international remote roles represents a documented pathway to economic empowerment for Nigerian developers. In 2014, Andela launched as a digital skill accelerator in Nigeria, recruiting and training software engineers for global remote employment. By 2021, Andela had placed over 1,000 Nigerian developers in remote jobs with international firms. It narrated that since its founding in 2014, Andela has opened up career paths for more than 175,000 budding software engineers from emerging economies. Most have technological or managerial roles, either in one of hundreds of established companies around the world, or in their own startups. Andela's success indicates a path to growth for talented people, not just in software but in a variety of professions, by building the skills that people need to work in a global economy. In its first two years, Andela found talented software engineers through online skill tests and interviews. Andela would train them in four-to-six month intensive "boot camps," invest in them by paying them to learn, and then place them in competitive jobs. Employees agreed to stay in those jobs for four years, supplementing their apprenticeships with further training on Andela's campus in Lagos, Nigeria. For client companies, this was a low-cost way to recruit talent. After their apprenticeships ended, some Andela alumni even parlayed their new skills to become leaders of the emerging tech sector in Nigeria. On average, technologists take home 87 percent more than what they were earning before. On a broader scale, these jobs could combine to generate a multiplier effect for the technologists' communities.

Moreso, Wired (2014) went further to affirm that one of early trainees in Andele's programme, Chibuzor Obiora highlighted his good story and real income gains derived from in-country digital employment opportunities made available through Andele.

Barriers to Digital Skill Acquisition in Nigeria: A Structural, Infrastructural, and Socio-Cultural Analysis

It is observed that the ambitious digital transformation agenda in Nigeria are greeted with a lot of challenges, varying by region, gender, and income level and can be categorized into structural, infrastructural, and socio-cultural barriers.

a) Structural Barriers

Structural barriers are the systemic and policy-level challenges that inhibit effective participation in digital skill programmes. They include educational inequalities, Fragmented Policy Implementation, and uneven budgetary allocations for ICT development.

i. Educational Inequalities: About 10.5 million children are out of school in Nigeria, majorly in the North-East and North-West. Many lack basic literacy needed to pursue digital skills (UNICEF, 2023).

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ii. Fragmented Policy Implementation: Though policies such as NDEPS and National Broadband Plan exist, poor inter-agency coordination and politicization of ICT projects limit sustainable impact (World Bank, 2022).

iii. Uneven budgetary allocations for ICT development: Public ICT and education budgets remain less than 6% of total national budget, below UNESCO's 15–20% recommendation. This funding gap has a massive negative impact on achieving a digital Nigeria.

b) Infrastructural Barriers

Infrastructure is the physical backbone for digital inclusion. The gaps in electricity, internet penetration, and access to digital devices are major inhibitors of digital literacy and upskilling.

i. Electricity Access: The Nigerian Electrification Agency (NEA, 2023) opined that 43% of Nigerians lack access to stable electricity, making online training and computer usage impractical in many communities.

ii. Internet Penetration: According to NCC (2024), while urban areas like Lagos and Abuja have over 80% 4G coverage, rural Northern regions remain below 25%, creating a stark digital divide.

iii. Access to digital devices: A smartphone with basic e-learning capability costs between ₦60,000–₦100,000, unaffordable to over 60% of the population living under the poverty line (NBS, 2023).

c) Socio-Cultural Barriers

Cultural norms, religious beliefs, and societal expectations often hinder marginalized populations—especially women and girls—from accessing digital training.

i. Gender Norms: In the North-East, girls are often discouraged from using technology due to conservative Islamic teachings. A study by GSMA (2022) found a 44% mobile internet usage gap between men and women in Northern Nigeria.

ii. Multi-Lingual Diversity: With over 500 indigenous languages, training programmes that are English-based become a challenge for non-English speakers.

iii. Technophobia: Older people and rural areas see technology as foreign or intimidating, reducing uptake.

Table 2: Digital Barriers across Population Groups

Barrier Type	Urban vs Rural	Gender	Income Level
Structural	Rural areas face weak policy targeting low outreach	Females have lower policy inclusion in ICT schemes	Lower-income populations lack access to enabling laws.
Infrastructural	Rural areas lack broadband, electricity, ICT centers	Women may have less access to phones, tech infrastructure	Low-income households cannot afford devices/data
Socio-Cultural	Rural traditions resist tech use or modern training formats.	Cultural/religious bias against female access to tech.	Survival needs override education or digital upskill

Digital Skills to Livelihood Pipeline

It is imperative that digital skills acquisition programmes be fully considered and adopted in Nigeria to help in alleviating poverty in Nigeria. This strategy will go a long way to improve the livelihood of Nigerian youths and in turn save the future of Nigeria's economy. The following pipeline illustrates the typical stages involved in leveraging digital skills for sustainable livelihood and economic empowerment in Nigeria:

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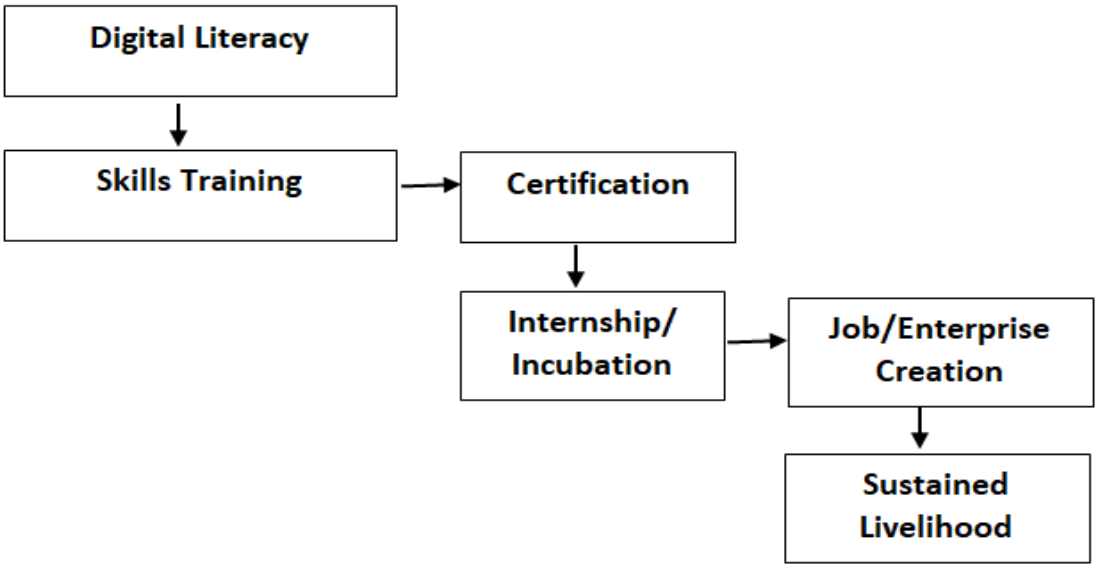

Figure 2: Diagram: Digital Skills to Livelihood Pipeline

Each of these stages is validated by outcomes shown in NITDA and Jobberman reports, as well as international models such as Andela and GADS. The empirical evidence confirms that structured acquisition of digital skills improves the probability of employment and entrepreneurship.

A Stepwise Implementation Framework for Digital Skill Acquisition as a Strategy for Poverty Alleviation in Nigeria

To implement digital skills acquisition programmes in Nigeria, there is need for more than broad policy declarations. It will require a coordinated, multi-stakeholder, step-by-step roadmap that can reflect Nigeria's demographic, infrastructural, and socio-economic realities.

Implementation Framework: A Stepwise Approach

1. Stakeholder Mapping and Mobilization: The Nigerian government should identify, engage, and define roles for critical stakeholders, such as the following,

a. Federal and State Ministries: Education, Communications, Youth and Labour.

b. Regulatory Agencies: NITDA, NCC, NBTE, NUC.

c. Private Sector: Tech companies (Google, Microsoft, Andela, MainOne), Telcos, fintechs.

d. Academic Institutions: Polytechnics, universities, and technical colleges.

e. Community Gatekeepers: Traditional rulers, religious leaders, and local government.

f. Development Partners: UNDP, World Bank, GIZ, etc.

This strategy could lead to establishing a multi-stakeholder advisory council for digital skills.

2. Needs Assessment and Target Profiling: The goal should be to understand the skill gaps and regional readiness. Hence,

i. Conduct surveys to assess literacy levels, access to devices and electricity, preferred languages, and gender-based access challenges; and

ii. Prioritize target groups (youth, women, unemployed graduates, rural artisans).

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This approach would help develop region-specific digital inclusion profiles.

3. Curriculum Design and Standards Alignment aimed at developing a modular, scalable, and competency-based digital skills curriculum.

i. Levels: Basic (digital literacy), Intermediate (content creation), Advanced (data, programming).

ii. Align with NUC, NBTE and UNESCO ICT-CFT competency standards.

iii. Localize content (language, cultural relevance, real-life case studies).

iv. Delivery formats:

a) In-person (ICT hubs)

b) Online (zero-rated mobile platforms)

c) Hybrid (community + online coaching)

This approach would help widen the spectrum of Curriculum making it a standardized national digital skills curriculum.

4. Training Infrastructure and Delivery Modalities, ensuring inclusive, cost-effective, and sustainable learning platforms.

i. Establish Digital Skills Training Hubs in:

a) Higher institutions of higher education

b) Secondary schools

c) Community centers

d) Mobile ICT vans for remote areas

ii. Equip each center with:

a) Internet access (preferably broadband)

b) Solar backup power systems

c) Laptops or shared tablets

National grid of digital empowerment centers can be achieved with this step.

5. Instructor Recruitment and Capacity Building which will help create a pipeline of well-trained digital trainers and mentors.

i. Recruit facilitators from NYSC, polytechnic lecturers, and local tech professionals.

ii. Train trainers in:

a) Pedagogy

b) Local language delivery

c) Accessibility (inclusion for persons with disabilities)

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6. Incentives and Program Support with the purpose of encouraging sustained participation.

The federal government should provide,

a) Monthly stipends for learners (linked to attendance and progress)

b) Free or subsidized devices

c) Certificates co-branded with NITDA/UNDP/Private sector

d) Post-training mentorship, internship, and startup grants

7. Monitoring, Evaluation, and Feedback Loops for a data-driven reporting and adaptive program refinement.

i. Create a Digital Skills Monitoring Dashboard at NITDA

ii. Key Metrics:

a) Enrollment and completion rates

b) Employment/freelance conversion rates

c) Income improvement and gender inclusion indices

iii. Use real-time feedback from trainees and trainers for iterative improvements.

Table 3: Summary of the Stepwise Framework

Step	**Key Output**
Stakeholder Engagement	Advisory Council
Needs Assessment	Regional Digital Profiles
Curriculum Design	Standardized, localized content
Infrastructure Delivery	Community ICT Hubs
Trainer Recruitment	Certified facilitators
Incentive Structure	Stipends, devices, mentorship
Monitoring System	Centralized digital dashboard

Policy Recommendations

- Anchor the framework in national digital economy and poverty eradication strategies.
- Ensure **federal-state-local collaboration** to avoid duplication and ensure scalability.
- Leverage the **National Social Investment Platform** for targeting and disbursement.
- Establish a **National Digital Inclusion Fund** with contributions from telcos and tech giants.

SUMMARY

Poverty is the lack of a sustainable livelihood. It does not only bring about hunger and insecurity but, a poor economy and being rated as one of the poor countries in the world. The federal government of Nigeria has in several administrations established several programs to alleviate poverty in the country. However, from the country's position in the global rating of poor countries, it seems that these efforts have not yielded much fruit. Nonetheless, all hope is not lost for Nigeria given that digital skills can be leveraged. It is an internet technology skill that is in high demand in Nigeria and beyond, it does not select gender and age, a professional can work from anywhere in the world, and above all, it improves one's financial status. These advantages and more are reasons the federal government can take advantage of digital skills to reduce poverty in the country. And it is hoped that it will help to drastically reduce poverty in Nigeria.

CONCLUSION

Internet technology is redefining the way the world does things. It has improved the economy and livelihood of many nations of the world; hence, some nations are developed while others are not. Digital Skills are in high demand all over the world because of the advancement in internet technology and the seemingly unending daily emergence of new users. With its relevance, demand, and profitability, the federal government of Nigeria can leverage it for the alleviation of poverty in the country.

RECOMMENDATION

The presence and application of technology in a country fastens its development and increases its global rating. Therefore, we recommend that the present government in Nigeria should consider digital skills as a viable leverage in their fight against poverty in the country.

Conflicts of Interest

There are no conflicts of interest regarding the publication of this paper.

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