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Strategies for Enhancing Digital Skills
among Africa's NEET Youth

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Strategies for Enhancing Digital Skills among Africa's NEET Youth

Priyal Mukesh Gala, Kabira Namit, and Huma Kidwai

Abstract

This background paper examines the critical issue of how to enhance digital skills among youth who are not in employment, education, or training (NEET) in Africa to prevent approximately 72 million young people (two-thirds of whom are young women) from being marginalized in a global economy rapidly undergoing a digital transformation.

First, it evaluates the current digital proficiency of the region's NEET population and identifies substantial structural barriers that contribute to widening digital disparities. Subsequently, the paper explores the transformative potential of digital skills in boosting employability, fostering entrepreneurship, and enabling broader participation in socioeconomic life.

Crucially, it then proposes scalable, cost-effective strategies, including public-private partnerships, mobile-first education initiatives, and community-based training programs.

These approaches are assessed for their practicality (cost effectiveness and scalability) and for their potential to equip Africa's NEET youth with the necessary digital competencies. If adopted at scale, these competencies can enable young people to join the economic mainstream and help translate Africa's demographic potential into widespread social and economic gains.

JEL Classification: J24, J64, O55, I25, I26

Keywords: NEET youth (Not in Employment, Education, or Training), digital skills, digital divide, digital literacy, digital inclusion, youth unemployment, skills gap, demographic dividend, mobile technology skills, computer skills, digital marketing, programming, data analytics, artificial intelligence, infrastructure, device affordability, educational gaps, gender bias, public private partnerships (PPPs), mobile-first approaches, community-based training centers, peer-to-peer learning, scalable solutions, cost-effective strategies, mobile learning platforms, mentorship programs, economic empowerment, social development, personal growth

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While the generative AI tool provided valuable assistance in data interpretation and content generation, all analyses, conclusions, and final recommendations were reviewed, edited, and approved by human experts to ensure accuracy, relevance, and ethical considerations.

The use of AI in this report which is about digital skills reflects the author's commitment to leveraging advanced technologies to enhance their analytical capabilities, while maintaining human oversight and judgment in the final product.

Abbreviations

AI	artificial intelligence
ILO	International Labour Organization
ITU	International Telecommunication Union
NEET	not in employment, education, or training
NGO	nongovernmental organization
OECD	Organisation for Economic Co-operation and Development
OSYP	Out of School Youth Project
PPP	public-private partnership
USAID	United States Agency for International Development

1. Introduction

In an era when digitalization is reshaping industries, education, and economies, the need to equip young people with digital skills is more pressing than ever. Nowhere is this challenge more acute than in Africa, where approximately 72 million youth fall into the category of “not in employment, education, or training” (NEET). Their exclusion from the opportunities afforded by a rapidly digitalizing global economy threatens to further entrench socioeconomic marginalization, especially for young women, who constitute two-thirds of Africa’s NEET population.

To assess the scale and nature of the digital skills gap among Africa’s NEET youth, this study employs a range of secondary data sources, including labor market statistics, education surveys, and reports on digital inclusion. The analysis draws upon data sets from both national and regional bodies, complemented by insights from global organizations such as the International Labour Organization (ILO) and UNESCO. These sources provide a detailed understanding of current digital proficiency levels and expose structural barriers that inhibit access to digital education and skills development.

In light of these challenges, this paper proposes evidence-based strategies aimed at enhancing the digital competencies of NEET youth. It focuses on scalable and cost-effective solutions, including public-private partnerships, mobile-first education initiatives, and community-based training programs. These strategies are evaluated for their practicality, feasibility, and potential to integrate Africa’s youth into the digital economy so that they can contribute meaningfully to the continent’s socioeconomic development.

By equipping NEET youth with digital skills, the region has the opportunity not only to address youth unemployment but also to convert into a demographic dividend and create a more inclusive and dynamic economy. The findings and recommendations presented in this paper are intended to guide policy makers and stakeholders toward actionable solutions that can mitigate digital inequalities and foster long-term, sustainable growth.

1.1 Defining “Digital Skills”

Assessing digital skills is a complex task, and there is no universally agreed-upon method of doing it (Misra 2022). Typically, estimates of digital skills come from three sources: self-assessment, task-based computer tests, and indirect signs like owning certain devices or having specific levels of education.

Each of these approaches has limitations. Sharp (2022) critiques self-assessment methods, noting that individuals often misjudge their abilities, leading to unreliable data. Studies show that women frequently underestimate their digital competencies compared to men, even when their skills are comparable (Hargittai and Shafer 2006; Schumacher and Morahan-Martin, 2001). Task-based tests often focus too narrowly on “computer skills,” missing the mark by overlooking competencies related to mobile technology, which is increasingly important in African contexts. Indirect measures like smartphone ownership or education levels do not necessarily indicate proficiency (Bashir and Miyamoto 2020).

For this paper, we adopt a working definition of digital skills based on the framework established by the International Finance Corporation (IFC/LEK 2019). Their framework conceptualizes digital skills as existing along a spectrum:

Basic digital skills: Foundational abilities for performing everyday tasks, such as using hardware, software, and basic online functions.

Intermediate digital skills: Skills enabling individuals to use technology for more meaningful work-related tasks, evolving with advancements in technology.

Advanced digital skills: Specialized competencies in emerging technologies like artificial intelligence (AI), big data, and cybersecurity, required by professionals in fields such as computer programming and network management.

Table 1 illustrates how digital skills at different levels can be applied across three major sectors: agriculture, industry, and services.

As Sub-Saharan Africa's economy evolves, the demand for digital skills is expected to grow faster than in other global markets (IFC/LEK 2019); however, significant gaps persist in intermediate and advanced digital skills. It is estimated that by 2030, over 230 million jobs in Sub-Saharan Africa will require digital skills; this represents nearly 650 million training opportunities.

This mismatch between supply and demand for digital skills at all levels poses a critical challenge. Although basic digital literacy is becoming more common, especially with the proliferation of mobile phone usage, there remains a substantial gap in the availability of intermediate and advanced skills, which are necessary to meet the needs of an increasingly digitalized economy. Addressing these gaps through targeted training programs and initiatives will be essential for Sub-Saharan Africa to capitalize on the digital revolution and prepare its workforce for the future.

Table 1.1. Digital Skills Examples

Level of digital skill	Sector	Task types	Examples
Basic digital skills	Agriculture	Internet research, mobile communication	Farmers using government websites to check crop prices or using social media apps like WhatsApp to share information
	Industry	Online communication, e-learning	Workers sharing work updates via messaging apps or watching online tutorials for tool operation
	Services	Online banking, communication with clients	Small businesses accessing banking portals, or ride-sharing drivers using apps and online maps
Intermediate digital skills	Agriculture	Use of simple spreadsheets, basic financial tools	Farmers tracking income and expenses using financial software
	Industry	Professional software usage	Engineers using AutoCAD, or workers managing projects with specialized software
	Services	Digital marketing, website design	Small business owners designing websites to attract customers
Advanced digital skills	Agriculture	Big data analytics, automation	Data analysts leveraging big data for crop yield predictions, or engineers developing robots
	Industry	Computer programming, network management	Specialists using robotics in manufacturing or running computer simulations
	Services	Cloud computing, machine learning	Developers building AI-powered applications or animators using software for film production

Source: Adapted from IFC/LEK (2019).

2. Current Proficiency Levels

The availability of reliable data on digital skills in Sub-Saharan Africa is limited, making it difficult to assess the full extent of the region's digital divide, especially for NEET youth. Studies such as Silver and Johnson's (2018) report on "Internet Connectivity in Sub-Saharan Africa" offer valuable insights but are often restricted to a handful of countries; for instance, their study found that smartphone ownership in the region ranged from 13 percent in Tanzania to 51 percent in South Africa. However, these data are not representative of the entire region (and are already outdated); large gaps persist in our understanding of the digital landscape across all Sub-Saharan African countries.

Reports like the *Digital Skills Toolkit* published by the International Telecommunication Union (ITU) reveal a wide disparity in digital skills between developed and developing countries¹. In poorer developing countries, only 19 percent of the population possesses basic digital skills, compared to 65 percent in developed countries. These basic skills (such as using a keyboard, managing files, and conducting simple online tasks) are essential for participation in today's digital economy. The disparity between developing and developed countries is even wider for more advanced, job-ready skills like desktop publishing or digital marketing.

The World Bank's *Demand for Digital Skills in Sub-Saharan Africa* report (2021) also highlights the uneven distribution of digital proficiency across sectors. For instance, in Kenya, 40–45 percent of the workforce in the service sector has some digital skills, but in Mozambique, this figure drops to just 20–25 percent. Across all five countries examined in the study, no more than 30 percent of the workforce had digital skills, suggesting how widespread lack of digital capabilities is across the region.

The Network Readiness Index (NRI) also provides valuable insights into digital readiness across 31 Sub-Saharan African countries, assessing factors such as internet usage, digital skills, and gender gaps. Notably, countries like South Africa, Ghana, Côte d'Ivoire and Botswana rank higher in digital skills, while many others, such as Chad and Burkina Faso, perform poorly². The NRI data also reveal significant gender disparities, with men generally having greater access to and use of digital technologies than women. This gap is particularly evident in countries like Uganda, where female internet usage is far lower than male (UNESCO 2019).

As noted earlier, notwithstanding the increasing prevalence of mobile phones, especially smartphones, the mere ownership of these devices does not guarantee digital proficiency. In many cases, youth are using their phones primarily for social and entertainment purposes rather than acquiring valuable digital skills that could enhance their employability. A Pew survey conducted by Silver and Johnson (2018) showed that only about one-third of mobile phone users in Sub-Saharan Africa use their phones to look up information,

¹ <https://www.itu.int/en/ITU-D/Digital-Inclusion/Youth-and-Children/Pages/Digital-Skills-Toolkit.aspx>

² The complete list of countries and the dataset can be found here: <https://networkreadinessindex.org/>

while a vast majority engage in nonproductive digital activities. Targeted training programs are needed to help NEET youth transition from basic to more advanced digital skills.

Moreover, foundational issues such as literacy and numeracy further hinder digital skills acquisition. Sub-Saharan Africa has the highest proportion of children and adolescents who have not achieved minimum levels in mathematics (84 percent) and reading (88 percent) (UNESCO 2017). As a consequence, digital literacy programs aimed at NEET youth must also address these fundamental educational deficiencies.

Gender and geographical disparities also exacerbate the digital divide. Young women and rural youth face additional barriers, ranging from limited access to digital infrastructure to societal norms that restrict their opportunities for digital learning. In Kampala and Nairobi, for example, a 2019 study found that only 20–21 percent of women used the internet, compared to 57–61 percent of men (UNESCO 2019). These numbers are likely to be significantly lower in parts of rural Uganda and Kenya. Youth with disabilities face even more profound challenges, with inadequate access to accessible technology and specialized training programs. Without targeted interventions, these marginalized groups risk being left further behind in an increasingly digital world.

Ultimately, the lack of comprehensive and up-to-date data on digital proficiency, especially among NEET youth, represents a significant challenge. Outdated studies fail to capture the rapidly evolving nature of digital technologies (particularly since the advent of AI), and the new skills required to navigate the digital economy. This data gap keeps policymakers, educators, and stakeholders from designing effective, targeted interventions. As technology continues to advance, there is an urgent need for more robust and current data to guide the development of programs that equip Africa's NEET youth with the digital skills they need to thrive in the modern economy.

3. Barriers to Access

Several barriers hinder the development of digital skills among NEET youth in Africa face several barriers to the development of their digital skills; these barriers exacerbate the digital divide and limit youth their participation in the digital economy.

Infrastructure Deficits: Access to digital skills is limited by significant infrastructure challenges. In many rural areas and low-income urban settlements, electricity is unreliable, broadband access is limited, and internet costs are high. A lack of access to devices like computers and smartphones further restricts opportunities for digital learning. The ITU reported that less than 40% percent of individuals in Africa use the internet; rates are even lower in some countries such as Tanzania (ITU 2022). Despite infrastructure improvements, digital literacy remains a critical barrier to leveraging mobile internet access in Sub-Saharan Africa (GSMA 2021).

Device Affordability: While smartphones have become more common, computers remain prohibitively expensive for most households. Schmidt and Stork (2008) reported that only 14.8 percent of households in South Africa owned computers, and just 4.8 percent had internet access. Although smartphones support basic digital activities such as browsing and social media, computers are essential for more advanced tasks, including programming, graphic design, and software development. In 2019, the cost of 1 GB of mobile internet in Africa averaged 10.5 percent of monthly per capita gross national income, far exceeding the United Nations Broadband Commission's recommended target of 2 percent³. Addressing the affordability of both devices and internet access is critical for expanding digital learning opportunities.

Educational Gaps: Educational inequities also contribute to digital exclusion. Only 50 percent of African countries include computer skills in their school curricula, compared to 85 percent of countries globally. NEET youth, especially, face compounded challenges, because of their low foundational literacy and numeracy. Without access to formal schooling, many NEET youth miss out on structured learning environments that offer systematic digital literacy instruction.

Gender Bias: Women and girls face additional barriers to developing digital skills due to the intersection of digital, rural, and gender divides. Cultural norms, safety concerns, and societal expectations often limit their access to digital technologies and training. As reported in the previous section, girls are less likely than boys to own mobile phones, computers, or social media accounts. Furthermore, they are more likely to experience online harassment, which discourages their participation in digital spaces. These gendered disparities, exacerbated by the COVID-19 pandemic, underscore the need for interventions to support young women specifically in acquiring digital skills.

³ <https://www.broadbandcommission.org/advocacy-targets/2-affordability/#:~:text=By%202025%2C%20entry%2Dlevel%20broadband,in%20achieving%20meaningful%20universal%20connectivity>

Disability Considerations: Youth with disabilities face significant barriers to digital skills development when educational and digital initiatives lack inclusive practices in. Many children with disabilities are excluded from formal schooling at higher rates than their peers without disabilities (Bost and Riccomini [2006], Zablocki and Krezmien [2012]), and digital tools that accommodate their needs, such as screen readers and alternative input devices, are often lacking. The high cost of assistive technologies further compounds this issue, excluding individuals with disabilities from fully participating in digital learning opportunities. In families where financial resources are limited, the lack of accessible digital tools and training programs remains a major obstacle to inclusion.

Addressing these barriers requires comprehensive strategies that go beyond simply providing technology. Efforts must include improving infrastructure, reducing the cost of devices, integrating digital skills into education, and addressing gender- and disability-related challenges. By addressing these barriers, we unlock the potential for digital skills to act as a transformative force, particularly for NEET youth, empowering them to overcome socioeconomic challenges and to participate actively in the digital economy—a theme explored in the next section.

4. The Impact of Digital Skills on NEET Youth

Globally, youth unemployment rates remain the highest of any age group (Global Employment Rate by Age 2024, n.d.).⁴ Within this group, undereducated youth struggle the most, as they are more likely to be out of employment or engaged in non-standard jobs (part-time or temporary) compared to their highly educated peers (Carcillo et al. 2015). Even when employed, they face greater challenges in maintaining stable employment (OECD 2014). Over the years, the number of young people classified as NEET (Not in Education, Employment, or Training) has grown, with 1 in 5 youth globally falling into this category (O'Dell 2024).

NEET youth often come from socially and economically disadvantaged backgrounds, and their prolonged unemployment can have long-term consequences beyond immediate financial hardship. These include generational poverty and increased social inequality (Carcillo et al. 2015). High proportions of NEET youth can also negatively affect national productivity and economic growth (Cáceres 2021). Furthermore, studies indicate that early unemployment experiences can lead to lower future earnings (Gregg & Tominey 2005; Mroz and Savage 2006) and a higher likelihood of future unemployment (Gregg 2001; Doiron and Gørgens 2008; Schmillen and Umkehrer 2013; Möller and Umkehrer 2014).

Given the significant barriers that NEET youth face in finding employment, digital skills offer a powerful opportunity to break this cycle of exclusion (Hamdan et al. 2024). Evidence shows that countries with lower NEET rates tend to have higher levels of digital skills among their youth populations (Madej-Kurzawa, Pieczarka, and Węgrzyn 2021). In today's digital age, digital inclusion expands opportunities for NEET youth by increasing their ability to perform work-related tasks, ultimately improving their employability and economic outcomes (Chauke 2024).

Equipping NEET youth with digital competencies can open pathways to enhanced employability, entrepreneurship, and active participation in social and economic life. Empowering these young people with digital tools is not only a strategy for individual upliftment but also a critical step toward building a more inclusive and equitable society (Hamdan et al. 2024).

4.1 Economic Empowerment

Potential for Online/Remote Work: Acquiring digital skills enables NEET youth to engage in online and remote work, which offers flexibility and access to global job markets without the need for migration. Gig economy platforms allow youth to offer services ranging from graphic design to virtual assistance, expanding their employment opportunities. Research shows that remote work can transfer economic activity from more expensive regions to less expensive ones (Ozimek 2020), making it particularly

⁴ Global employment rate by age 2024. (n.d.). Statista. Retrieved June 23, 2024, from <https://www.statista.com/statistics/1337137/global-employment-rate-age/>

beneficial in areas with limited local employment opportunities (Kahn 2022). Additionally, NEET youth engaged in remote work can contribute to their families' financial independence through remittances (Hamdan et al. 2024). Gaining digital skills can enhance their resilience in the labor market and open better employment opportunities (Zamfir & Aldea 2020).

Entrepreneurial Opportunities: Digital entrepreneurship has emerged as a significant driver of economic growth and job creation in Africa (UNDP 2023). With access to digital tools and platforms, NEET youth can start and scale businesses with relatively low capital investment. E-commerce platforms and social media offer opportunities for youth entrepreneurs to reach broader markets where they can promote their products or services. Furthermore, digital skills enable innovation, allowing young people to develop solutions to local challenges, contributing to both community development and economic resilience.

4.2 Social Development

Fostering Online Communities and Social Engagement: Digital proficiency helps NEET youth connect with online communities, fostering social networks that provide emotional support and opportunities for personal and professional growth. These online interactions can enhance their sense of belonging and offer access to valuable networks (Neagu et al. 2021).

Participation in Civic Life: Digital skills also facilitate greater civic participation. NEET youth can engage in online advocacy, access government services, and participate in digital platforms that promote transparency and accountability (Zhang et al. 2024). Increased digital literacy allows them to play a more active role in civic processes, contributing to their own empowerment and fostering a more engaged citizenry.

4.3 Personal Growth

Improved Problem Solving and Critical Thinking: Navigating digital environments involves the ability to troubleshoot technical issues and leverage online resources. These analytic and solutions-oriented skills are transferable across various aspects of life and work, contributing to overall personal development. Evidence further showed that information literacy and data literacy contribute to the psychological empowerment of the individual (Deja et al. 2024).

Heightened Self-Confidence and Sense of Agency: Studies have observed that digital technology use positively influences self-concept and self-esteem (Jackson et al. 2010). Mastering digital skills can significantly boost the self-confidence of NEET youth (Khampirat 2021). The ability to competently use digital tools and navigate online platforms instils a sense of accomplishment and self-efficacy. This newfound confidence could motivate youth to pursue further learning opportunities.

The acquisition of digital skills holds transformative potential for NEET youth in Africa. Investing in digital skills will not only empower young people economically and socially; it will also lay the foundation for a resilient generation capable of driving Africa's socioeconomic development forward.

5. Strategies for Bridging the Divide at Scale

5.1 Public-Private Partnerships

In the context of Africa, where resource constraints, institutional limitations, and demographic challenges present significant barriers to socioeconomic development, bridging the digital divide for NEET youth necessitates innovative strategies that can be implemented at scale. Public-private partnerships (PPPs) emerge as a pivotal approach, leveraging the complementary strengths of governments, nongovernmental organizations (NGOs), and technology companies to address complex challenges and unlock opportunities for sustainable growth (ADB 2015).

PPPs hold particular importance in Africa, where traditional education systems often struggle to meet the needs of rapidly growing population. They offer a dynamic framework for mobilizing resources, recruiting expertise, and fostering collaboration among diverse stakeholders to drive youth empowerment and digital skills development initiatives.

Governments in many African countries face budgetary constraints and competing priorities that limit their ability to invest adequately in education and skill development initiatives (Dutta et al. 2023). PPPs enable governments to leverage private sector resources, expertise, and innovation to amplify the impact of their interventions.

NGOs and technology companies bring specialized knowledge, technical expertise, and innovative solutions to the table, complementing the regulatory and administrative capabilities of governments (Dutta et al. 2023). For example, NGOs often possess grassroots insights and community networks that can inform the design and delivery of targeted interventions for NEET youth.

Collaboration between governments, NGOs, and tech companies allows for the pooling of resources, sharing of best practices, and coordination of efforts to maximize impact. By aligning their strengths and resources, stakeholders can overcome silos and deliver comprehensive solutions addressing the multifaceted challenges faced by NEET youth (UNICEF 2021).

PPPs also can promote inclusivity and equity by ensuring that digital skills initiatives reach marginalized and underserved populations. NGOs, with their deep-rooted connections within communities, facilitate community engagement and culturally relevant programming. By fostering collaborative partnerships, governments, NGOs, and tech companies can create sustainable models for delivering digital skills training. An illustrative example is the Generation Unlimited (GenU) initiative which brings together governments, CEOs, foundations, and civic leaders to forge innovative collaborations with young people at the center. With a focus on digital skills acquisition, GenU aims to connect millions of young people in Africa to quality

education, training, and employment opportunities by 2030, ensuring long-term resilience and prosperity (GenU n.d.).⁵

5.2 Mobile-First Approaches

Mobile-first approaches play a crucial role in reaching NEET youth, who often face barriers to accessing traditional education and skills development opportunities. For marginalized and vulnerable populations, including refugees, internally displaced persons, and those living in remote or underserved areas, mobile devices serve as lifelines to education, offering a gateway to learning, regardless of physical location or institutional infrastructure.

By leveraging mobile technology, organizations and initiatives can reach NEET youth where they are, providing them with access to digital skills training, educational resources, and support services tailored to their needs and circumstances. Mobile-first approaches enable flexible and personalized learning experiences, accommodating the diverse learning styles, preferences, and constraints of NEET youth, who may be juggling familial responsibilities, economic pressures, or other challenges.

Moreover, mobile-first approaches empower NEET youth to take ownership of their learning journey, offering them the autonomy and agency to pursue education and skills development at their own pace and convenience. Through interactive and engaging content delivered via mobile devices, youth can acquire essential digital skills, expand their knowledge base, and unlock new opportunities for personal growth, social mobility, and economic empowerment (UNICEF 2021).

In essence, mobile-first approaches hold the potential to break down barriers to education and skills development, reaching NEET youth and marginalized populations where traditional interventions fall short.

In recent years, the proliferation of mobile technology has revolutionized education and skills development, particularly in regions with high mobile phone penetration such as Africa. The impact of mobile-first approaches in empowering youth through digital skills development, can be seen in innovative programs, platforms, and initiatives that leverage the ubiquity of mobile devices to bridge the digital divide.

The Mobile Leap program, spearheaded by the International Labour Organization (ILO), is a pioneering initiative equipping young individuals with essential digital skills while fostering personal and professional development. Grounded in the recognition of the pivotal role of digital literacy in navigating the modern workplace, this peer-led training program harnesses the power of smartphones to empower youth to embrace the opportunities presented by the digital economy (ILO 2023).

⁵ GenU, n.d. Solutions and Promising Ideas Book. <https://www.generationunlimited.org/media/906/file>

At the heart of the program is a comprehensive curriculum that covers a wide range of digital competencies, including internet navigation, digital communication, basic coding, and online collaboration. Through interactive sessions, hands-on activities, and real-world projects, participants acquire technical skills and cultivate the skills in critical thinking, problem solving, and teamwork that are essential for success in the digital age.

One of the defining features of the Mobile Leap program is its peer-led approach, which fosters a collaborative and supportive learning environment. By engaging participants as co-facilitators and mentors, the program cultivates a sense of ownership and empowerment among youth, encouraging active participation and knowledge sharing. Moreover, the peer-led model promotes social cohesion and community building, enabling participants to learn from each other's experiences and perspectives.

The success of the Mobile Leap program extends to its impact on participants' lives and communities. By equipping youth with digital skills and fostering a mindset of lifelong learning, the program empowers them to pursue opportunities in the digital economy, ranging from employment and entrepreneurship to civic engagement and social innovation. Furthermore, the program catalyzes broader socioeconomic development, driving innovation, productivity, and inclusive growth in communities across Africa.

In Uganda, Educate!'s VIP Virtual Bootcamp exemplifies the transformative potential of mobile technology in delivering remote entrepreneurship training to young people in vulnerable situations. Amid the challenges posed by the COVID-19 pandemic, the program successfully pivoted its in-person training model to a virtual format, using mobile phones as a primary medium of instruction (UNICEF 2021).

Through innovative approaches such as conference calls, SMS-based content delivery, and virtual mentorship sessions, the VIP Virtual Bootcamp provides participants with access to high-quality entrepreneurship training that is tailored to their needs and circumstances. From business planning and financial management to marketing and digital literacy, the program equips youth with the knowledge, skills, and resources necessary to launch and sustain their ventures in an increasingly digitized world.

By embracing mobile-first approaches, Educate!'s VIP Virtual Bootcamp overcomes traditional barriers to education and skills development, including geographical constraints, resource limitations, and disruptions caused by emergencies such as the COVID-19 pandemic. Moreover, the program exemplifies the potential of mobile technology to democratize access to education and empower marginalized youth to pursue economic opportunities and realize their full potential.

In addition to specific programs, many mobile learning platforms and solutions are revolutionizing education and skills development by offering accessible, flexible, and personalized learning experiences tailored to the needs of diverse learners. These platforms leverage the ubiquity of mobile devices to deliver interactive, multimedia-rich content; engage learners through gamification and social learning features; and provide real-time feedback and assessment.

Among the notable mobile learning platforms is the Learning Passport, a joint initiative by UNICEF and Microsoft aimed at providing young people, including those in forcibly displaced populations, with access to quality education and opportunities for skills development. Available online and soon offline, the Learning Passport offers a wide range of courses, resources, and tools designed to enhance learners' academic achievement, employability, and socioeconomic empowerment (UNICEF 2021).

Furthermore, microlearning platforms such as Cell-Ed and Funzi deliver bite-sized, interactive lessons directly to mobile devices, catering to learners' busy schedules and diverse learning preferences. By breaking down complex concepts into digestible modules and incorporating gamification elements, these platforms enhance learner engagement, retention, and application of knowledge in real-world contexts (UNICEF 2021).

5.3 Community-based Training Centers

Community-based training centers serve as inclusive hubs for NEET youth, offering them access to essential resources such as reliable internet connection, internet-enabled devices, and mentorship opportunities. For marginalized youth, including those from rural or underserved areas, these centers provide a lifeline to digital skills training, employment opportunities, and socioeconomic empowerment.

Moreover, community-based training centers create a conducive learning environment where youth can collaborate, innovate, and learn from each other's experiences. By fostering a sense of belonging and community ownership, these centers empower youth to take charge of their learning journey and pursue diverse pathways to success in the digital age.

Generation Kenya uses an innovative superagent model to mentor and train new freelancers, particularly out-of-school youth. Under this program, experienced freelancers, known as superagents, mentor and guide new freelancers in building their online gig work businesses, providing them with valuable feedback, ratings, and work opportunities (Dutta et al. 2023).

The superagent mentoring model lasting about 12 weeks. It enables new freelancers to gain practical skills, build their online portfolios, and establish a reputation in the gig economy. By leveraging existing infrastructure and networks, such as government training centers and local freelancer associations, Generation Kenya maximizes the reach and impact of its mentorship program, empowering out-of-school youth to thrive in the digital marketplace.

The Ajira Digital Program, initiated by the Ministry of Information, Communications and the Digital Economy in Kenya, establishes Youth Empowerment Centers or "innovation hubs" at the subnational level, using existing public infrastructure such as government training centers. These centers provide NEET youth with access to internet connectivity, computers, training, and mentorship to enable them to work in the online gig economy.

Through partnerships with members of Parliament and local communities, the Ajira Digital Program has set up more than 100 centers across Kenya, bridging the digital divide and providing marginalized youth with opportunities for skills development and economic empowerment. By leveraging existing resources and infrastructure, the program ensures sustainability and long-term impact in empowering NEET youth (Howard 2023).

The eRezeki income generation centers in Malaysia, known as Wakil eRezeki, leverage existing government telecenters to facilitate training and microtask performance for beneficiaries, including NEET youth. These centers provide youth from rural areas with access to reliable internet connection, computers, and mentorship, enabling them to participate in the digital gig economy (Dutta et al. 2023).

Despite challenges such as underutilization and financial sustainability, the eRezeki centers demonstrate the importance of physical infrastructure and venue in reaching NEET youth and providing them with essential resources for digital skill development and online work. By adapting to the cultural context and needs of local communities, these centers contribute to gender-inclusive and accessible learning environments for youth empowerment.

Community-based training centers serve as essential platforms for empowering NEET youth with digital skills, mentorship, and employment opportunities. These centers leverage existing infrastructure, networks, and resources, to narrow the digital divide and foster long-term sustainability in youth empowerment initiatives. Through innovative models and partnerships, community-based training centers can transform the lives of marginalized youth, enabling them to thrive in the digital economy and contribute to inclusive socioeconomic development.

5.4 Peer-to-Peer Learning Programs

Peer-to-peer learning programs offer a dynamic and effective way for NEET youth to support and motivate each other in their journey toward acquiring digital skills and accessing online gig opportunities. By leveraging the expertise and experiences of “near-peer” mentors, these programs create inclusive and supportive learning environments where youth can learn from each other, share insights, and overcome challenges together (Dutta et al. 2023).

Moreover, peer-to-peer learning programs promote competition and recognition among participants, incentivizing them to strive for excellence in income generation, online rankings, and client acquisition. By fostering a sense of camaraderie and healthy competition, these programs empower youth to unleash their full potential and achieve success in the digital gig economy.

The Out of School Youth Project (OSYP) in Mali targets out-of-school children in the Timbuktu region, providing them with literacy, entrepreneurship, and technical training to support self-employment and income-generating activities. Implemented by Education Development Center, Inc. (EDC) in collaboration

with various partners, including USAID and local ministries, OSYF adopts an integrated model of support and training (GenU n.d.).⁶

Through basic education courses, entrepreneurship training, e-learning via mobile phones, technical training, and mentorship by youth volunteers and local trainers, OSYF empowers youth to develop essential skills and launch microenterprises. With a focus on peer learning and community engagement, OSYF has achieved significant results, including improved reading skills, self-employment opportunities, and establishment of savings and lending groups.

The SmartUp Factory project empowers marginalized young men and women aged 17–26 in Uganda and Ethiopia to develop innovative solutions for positive social change through skills training, mentorship, and peer-to-peer support. Implemented by Plan International and various partners, SmartUp Factory creates inclusive and youth-friendly spaces where participants can interact, network, and access opportunities for meaningful employment (GenU n.d.).⁷

By providing dedicated training, mentoring, and access to resources, SmartUp Factory enables participants to incubate innovative business concepts and address community challenges. With a focus on gender equity and youth leadership, the project has reached thousands of youths, with a significant proportion of girls and women participating in the program and contributing to its success.

Peer-to-peer learning programs offer a transformative approach to empowering NEET youth with digital skills, entrepreneurship opportunities, and socio-emotional support. The digital fluency of “near-peer” mentors and networks of collaboration and innovation enable marginalized youth in these programs to unlock their potential, pursue economic independence, and drive positive change in their communities.

⁶ GenU, n.d. Solutions and Promising Ideas Book. <https://www.generationunlimited.org/media/906/file>

⁷ GenU, n.d. Solutions and Promising Ideas Book. <https://www.generationunlimited.org/media/906/file>

Table 5.1. Summary of Case Studies

Program	Duration	Costs Involved	Implementing Agency	Impact Achieved	Lessons Learned
Ajira Digital Program	Ongoing	Not specified	Government of Kenya in partnership with local communities and members of Parliament	Established over 100 centers providing internet connectivity, computers, training, and mentorship to out-of-school youth, enabling them to participate in the online gig economy.	Leveraging existing resources and infrastructure ensures sustainability and long-term impact. Community involvement is crucial for the success of such initiatives.
eRezeki Income Generation Centers (Malaysia)	Ongoing	Not specified	Government of Malaysia	Provided youth from rural areas with access to reliable internet, computers, and mentorship, enabling participation in the digital gig economy.	Physical infrastructure and venue are essential for reaching out-of-school youth. Adapting to the cultural context and needs of local communities is crucial for success.
Mobile Leap	Ongoing	Not specified	International Labour Organization	Equipped young individuals with essential digital skills through a peer-led training program, fostering personal and	Peer-led approaches foster a collaborative and supportive learning environment. Engaging participants as co- facilitators and mentors

Program	Duration	Costs Involved	Implementing Agency	Impact Achieved	Lessons Learned
				professional development.	promotes social cohesion and community building.
Generation Kenya	12 weeks	Not specified	Generation Kenya	Enabled new freelancers to gain practical skills, build online portfolios, and establish a reputation in the gig economy.	Mentorship from experienced freelancers (super agents) is vital for the success of new freelancers. Practical, hands-on training is more effective than theoretical knowledge alone.
Educate!s VIP Virtual Bootcamp	Ongoing, adapted during the COVID-19 pandemic	Not Specified	Educate!	Successfully pivoted from in-person to virtual format, providing entrepreneurship training via mobile phones. Participants gained skills in business planning, financial management, marketing, and digital literacy.	Mobile-first approaches can overcome geographical constraints and resource limitations. Virtual mentorship and SMS-based content delivery are effective in providing tailored training to youth in vulnerable contexts.
Generation Unlimited (GenU)	Ongoing, the goal to connect millions of young people by 2030.	Not specified	Collaboration among governments, CEOs, foundations, and civic leaders	Aims to connect millions of young people in Africa to quality education and employment opportunities.	Public-private partnerships are crucial for mobilizing resources and expertise. Mobile-first approaches are effective in reaching marginalized and vulnerable populations, including refugees and those in remote areas.

Program	Duration	Costs Involved	Implementing Agency	Impact Achieved	Lessons Learned
Out-of-School Youth Project Mali	Ongoing	Not specified	Education Development Center, Inc. in collaboration with USAID and local ministries.	Provided literacy, entrepreneurship, and technical training to out-of-school children in the Timbuktu region. Achieved improved reading skills, self-employment opportunities, and establishment of savings and lending groups.	Integrated models of support and training, focusing on peer learning and community engagement, are effective in empowering youth to develop essential skills and microenterprises.
SmartUp Factory	Ongoing	Not specified	Plan International and various partners	Empowered marginalized young men and women aged 17–26 to develop innovative solutions for positive social change through skills training, mentorship, and peer-to-peer support. Created inclusive and youth-friendly spaces for interaction, networking, and access to	Dedicated training, mentoring, and access to resources enable participants to incubate innovative business concepts and address community challenges. Inclusive and supportive learning environments foster collaboration and innovation among youth.

Program	Duration	Costs Involved	Implementing Agency	Impact Achieved	Lessons Learned
				meaningful employment opportunities.	

Source: Summary of interventions (adapted from Dutta et al., 2023; GenU, n.d.; Howard, 2023; ILO, 2023; and UNICEF, 2021).

6. Conclusion

The case studies highlight several key lessons and preconditions essential for bridging the digital divide for NEET youth. Community engagement and leveraging existing resources are critical for the sustainability and long-term impact of digital skills initiatives. Practical, hands-on training and mentorship significantly enhance skill development and confidence among participants. PPPs emerge as a powerful strategy, combining the strengths and resources of diverse stakeholders to deliver comprehensive and solutions that have impact. Additionally, mobile-first approaches and robust physical infrastructure are vital for reaching marginalized and underserved populations, as are reliable internet access and internet-enabled devices are fundamental prerequisites. Long-term commitment from governments, NGOs, and private sector partners is necessary to sustain these initiatives. Programs must also be culturally relevant and tailored to the socioeconomic context of their target populations. Finally, sustainable funding and operational models are crucial to ensure the longevity and effectiveness of these digital skills development efforts.

Box 6.1. Roles in Public-Private Partnerships

Government's Role:

1. Policy and Regulation:

- **Develop and implement national digital skills strategies:** Set clear goals, identify target groups, and outline necessary infrastructure and training programs.
- **Create a conducive regulatory environment:** Establish clear legal frameworks for digital skills development, promote open data access, and ensure cybersecurity.
- **Promote digital literacy and awareness:** Implement campaigns to raise awareness about the importance of digital skills and encourage participation in training programs.

2. Funding and Infrastructure:

- **Allocate sufficient resources:** Invest in digital infrastructure development, including broadband connectivity, affordable internet access, and device affordability programs.
- **Provide financial incentives:** Offer grants, subsidies, and tax breaks to encourage private sector investment in digital skills initiatives.
- **Support the development of digital infrastructure:** Invest in building and maintaining digital infrastructure, particularly in rural areas.

3. Collaboration and Coordination:

- **Facilitate partnerships:** Create platforms for collaboration between government agencies, NGOs, and private sector companies.
- **Coordinate efforts:** Ensure that different initiatives are aligned and complementary to avoid duplication and maximize impact.
- **Monitor and evaluate progress:** Regularly assess the effectiveness of public-private partnerships (PPPs) and make adjustments as needed.

Private Sector's Role:

1. Innovation and Expertise:

- **Develop innovative training programs:** Leverage technology and expertise to create engaging and effective digital skills training programs.
- **Provide technical expertise:** Offer technical support and guidance to government agencies and nongovernmental organizations (NGOs) in implementing digital skills initiatives.
- **Develop and deploy digital tools:** Create and distribute affordable and accessible digital tools and platforms for learning and work.

2. Resource Mobilization:

- **Invest in digital skills development:** Allocate resources to fund training programs, infrastructure development, and research.
- **Create employment opportunities:** Offer internships, apprenticeships, and job placements for youth not in employment, education, or training who have acquired digital skills.
- **Support community-based initiatives:** Partner with NGOs and local communities to deliver digital skills training in underserved areas.

3. Marketing and Outreach:

- **Promote digital skills programs:** Raise awareness about the benefits of digital skills and encourage participation in training programs.

Box 6.1 (continued)

- **Connect youth with opportunities:** Facilitate access to online job platforms, freelance marketplaces, and other digital work opportunities.
- **Share best practices:** Disseminate knowledge and experience to other stakeholders to promote the adoption of successful PPP models.

Actionable Guidance:

1. **Focus on Scalability and Sustainability:** Design PPPs to reach many NEET youth and ensure they are sustainable in the long term.
2. **Tailor Programs to Local Needs:** Ensure digital skills initiatives are culturally relevant and address the specific challenges faced by NEET youth in different regions.
3. **Prioritize Inclusivity:** Ensure that marginalized groups, including women, youth with disabilities, and those from rural areas, have equal access to digital skills training.
4. **Measure and Evaluate Impact:** Regularly assess the effectiveness of PPPs and adjust based on data and feedback.
5. **Foster Collaboration and Knowledge Sharing:** Encourage open communication and knowledge sharing between government, NGOs, and private sector partners.

Source: Summary of key findings (adapted from ADB, 2015; Dutta et al., 2023; GenU, n.d.; Howard, 2023; ILO, 2023; and UNICEF, 2021).

References

Alao, A., and R. Brink. 2022. "Strategies for Using ICT Skills in Educational Systems for Sustainable Youth Employability in South Africa." *Sustainability* 14(24): 16513

<https://doi.org/10.3390/su142416513>

Aldersey, H.M. et al. 2024. "'I Really Wanted to Further My Education but That Wasn't Possible': Out of School Experiences of Youth with Disabilities in Ethiopia, Ghana, and South Africa." *International Journal of Disability, Development and Education*. 72(2), 195–212.

<https://www.tandfonline.com/doi/full/10.1080/1034912X.2024.2317476>

Asian Development Bank. 2015. *Public-Private Partnerships in Information and Communication Technology for Education*.

<https://www.adb.org/sites/default/files/publication/176953/ppp-ict-education.pdf>

Avanesian, G., Htet Thiha Zaw, P. Kelly, and Suguru Mizunoya. 2024. "Dissecting the digital divide: A household fixed effects approach to estimating gender gaps in digital skills of youth in low- and middle-income economies." *Heliyon*, 10(12), e33127–e33127. <https://doi.org/10.1016/j.heliyon.2024.e33127>

Bashir, S. 2022. *Digital Skills in Africa*. ResearchGate.

https://www.researchgate.net/publication/365329315_Digital_Skills_in_Africa

Bashir, S., and K. Miyamoto. 2020. *Digital Skills* (No. 35080). Washington, DC: World Bank Group.

Bost, L. W., and P. J. Riccomini. 2006. "Effective Instruction: An Inconspicuous Strategy for Dropout Prevention." *Remedial and Special Education*, 27(5), 301–311.

<https://doi.org/10.1177/07419325060270050501>

Breene, K. 2016, July 6. "What is 'networked readiness' and why does it matter?" World Economic Forum.

<https://www.weforum.org/agenda/2016/07/what-is-networked-readiness-and-why-does-it-matter/>

Carcillo, S., R. Fernández, S. Königs, and A. Minea. 2015. "NEET Youth in the Aftermath of the Crisis: Challenges and Policies." OECD Social, Employment and Migration Working Papers, No. 164. OECD Publishing, Paris. <https://doi.org/10.1787/5js6363503f6-en>

Chauke, Thulani Andrew. 2024. "Skills Learnt in Youth Work Practice Necessary for the Digital Age: A Qualitative Study of NEET Youth." *Research in Social Sciences and Technology*, 9(1), 351–368.

<https://doi.org/10.46303/ressat.2024.20>

Choudhry, Misbah Tanveer, E. Marelli, and M. Signorelli. 2012. "Youth unemployment rate and impact of financial crises." *International Journal of Manpower*, 33(1), 76–95.
<https://doi.org/10.1108/01437721211212538>

Chetty, K., U. Aneja, V. Mishra, N. Gcora, and J. Josie. 2018. "Bridging the digital divide in the G20: skills for the new age." *Economics: The Open-Access, Open-Assessment E-Journal*, 12.
<https://doi.org/10.5018/economics-ejournal.ja.2018-24>

Cox, M., L. Cheng, and A. Forbes. 2018. Bridging the digital divide: a South African perspective. *Advanced Photonics 2018 (BGPP, IPR, NP, NOMA, Sensors, Networks, SPCom, SOF), OSA Technical Digest (online) (Optica Publishing Group, 2018)*, paper NeW2F.3.
<https://doi.org/10.1364/NETWORKS.2018.NEW2F.3>

Datta, Namita; Rong, Chen; Singh, Sunamika; Stinshoff, Clara; Iacob, Nadina; Nigatu, Natnael Simachew; Nxumalo, Mpumelelo; Klimaviciute, Luka. 2023. *Working Without Borders: The Promise and Peril of Online Gig Work*. © Washington, DC: World Bank. <http://hdl.handle.net/10986/40066>

Deja, M., P. Bobkowski, I. Huvila, and A. Mierzecka. 2024. "Empowering through digital skills: A case of alumni in the business services sector." *Journal of the Association for Information Science and Technology*. <https://doi.org/10.1002/asi.24890>

Dobransky, K., and E. Hargittai. 2016. "Unrealized potential: Exploring the digital disability divide." *Poetics*, 58, 18–28. <https://doi.org/10.1016/j.poetic.2016.08.003>

Doiron, D., and T. Gørgens. 2008. "State dependence in youth labor market experiences, and the evaluation of policy interventions." *Journal of Econometrics*, 145, 81–97. Elsevier

Dutta, S., and B. Lanvin. 2023. *Network Readiness Index 2023*.
https://download.networkreadinessindex.org/reports/nri_2023.pdf

Eamon, M. 2004. "Digital Divide in Computer Access and Use Between Poor and Non-Poor Youth." *The Journal of Sociology & Social Welfare*. <https://doi.org/10.15453/0191-5096.2985>.

Eynon, R., and A. Geniets. 2016. "The digital skills paradox: how do digitally excluded youth develop skills to use the internet?" *Learning, Media and Technology*, 41, 463– 479.

Mo Ibrahim Foundation. 2023. *Global Africa Africa: in the World and the World in Africa*. Forum Report 2023. London: Mo Ibrahim Foundation.
<https://mo.ibrahim.foundation/sites/default/files/2023-07/2023-forum-report.pdf>

GSMA. 2021. *The state of mobile internet connectivity 2021*. GSMA.

<https://www.gsma.com/r/wp-content/uploads/2021/09/The-State-of-Mobile-Internet-Connectivity-Report-2021.pdf>

Gregg, P. 2001. "The impact of youth unemployment on adult unemployment in the NCDS." *The Economic Journal*, Vol. 111(475), 626–653.

Gregg, P., and E. Tominey. 2005. "The wage scar from male youth unemployment." *Labour Economics*, Vol. 12(4), 487–509. Elsevier.

Hamdan, AA. D. Singh, J. Kovilpillai, I. F. Kamsin, C. Suriyarangsun, W. Brahmawong, P. Phanphai, and S. Aggarwal. 2024. "Empowering Neet Girls Through Digital Skills: The Digitally Intelligent Girls (Di-Girls) Initiative's Potential, Pitfalls and Prospects." *International Journal of Academic Research in Progressive Education and Development*, 13(1). <https://doi.org/10.6007/ijarped/v13-i1/19396>

Hargittai, E., and S. Shafer. 2006. "Differences in Actual and Perceived Online Skills: The Role of Gender." *Social Science Quarterly*, 87, 432–448. <https://doi.org/10.1111/J.1540-6237.2006.00389.X>

Howard, C. 2023. "Digital Skills for Youth Employment in Africa: Fostering Digital Transformation for Social Inclusion, Gender Equality & Development." INCLUDE Knowledge Platform on Inclusive Development Policies. <https://includeplatform.net/wp-content/uploads/2023/01/digital-skills-for-youth-employment-in-africa-1.pdf>

IFC (International Finance Corporation)/LEK Consulting. 2019. *Digital Skills in Sub-Saharan Africa: Spotlight on Ghana*. Washington DC: International Finance Corporation. Available at: 24 https://www.ifc.org/wps/wcm/connect/ed6362b3-aa34-42ac-ae9fc739904951b1/Digital+Skills_Final_WEB_5-7-19.pdf?MOD=AJPERES

International Labour Organization. 2023. "Empowering youth in Kenya with market-driven digital skills." ILO, Nairobi. September 19. <https://www.ilo.org/resource/article/empowering-youth-kenya-market-driven-digital-skills>

ITU (International Telecommunication Union). 2018. *ITU Digital Skills Toolkit 2018*. Available at: <https://www.itu.int/en/ITU-D/DigitalInclusion/Documents/ITU%20Digital%20Skills%20Toolkit.pdf>

ITU. 2022. *Facts and Figures 2022: Internet Use*. <https://www.itu.int/itu-d/reports/statistics/2022/11/24/ff22-internet-use/>

Jackson, L. A., A. von Eye, H. E. Fitzgerald, Y. Zhao, and E. A. Witt. 2010. "Self-concept, self-esteem, gender, race and information technology use." *Computers in Human Behavior*, 26(3), 323–328. <https://doi.org/10.1016/j.chb.2009.11.001>

James, J. 2019. "Confronting the scarcity of digital skills among the poor in developing countries." *Development Policy Review*, 39(2). <https://doi.org/10.1111/dpr.12479>

Kahn, M. E. 2022. *Going Remote: How the Flexible Work Economy Can Improve Our Lives and Our Cities*. Berkeley, Calif. University of California Press.

Khampirat, B. 2021. "Relationships between ICT competencies related to work, self-esteem, and self-regulated learning with engineering competencies." *PLOS ONE*, 16(12), e0260659. <https://doi.org/10.1371/journal.pone.0260659>

Kraak, A. 2013. "State failure in dealing with the NEET problem in South Africa: which way forward?" *Research in Post-Compulsory Education*, 18(1–2), 77–97. <https://doi.org/10.1080/13596748.2013.755819>

Livingstone, S., G. Mascheroni, and M. Stoilova. 2021. "The outcomes of gaining digital skills for young people's lives and wellbeing: A systematic evidence review." *New Media & Society*, 25(5), 146144482110431. <https://doi.org/10.1177/14614448211043189>

Cáceres, Luis René. 2021. "Youth Unemployment and Underdevelopment in Honduras." *International Journal of Economics and Finance*, 13(2), 61–83. <https://doi.org/10.5539/ijef.v13n2p61>

Madej-Kurzawa, I., K. Pieczarka, and G. Węgrzyn. 2021. "Professional and educational activity of youth in the digital economy." *Problems and Perspectives in Management*, 19(3), 175–184. [https://doi.org/10.21511/ppm.19\(3\).2021.15](https://doi.org/10.21511/ppm.19(3).2021.15)

Malti, W., and N. Ngoepe. 2019. "Capitalizing on digital literacy skills for capacity development of people who are not in education, employment or training in South Africa." *African Journal of Science, Technology, Innovation and Development*, 12(2): 129–139. <https://doi.org/10.1080/20421338.2019.1624008>

Misra, A. 2022. *Fostering Digital Skills in Developing Countries—What Works?* Blavatnik School of Government. University of Oxford. <https://www.bsg.ox.ac.uk/sites/default/files/2022-08/2022-07-Fostering-digital-skills-Archita-Misra.pdf>

Möller, J., and M. Umkehrer. "Are There Long-Term Earnings Scars From Youth Unemployment in Germany?" ZEW Discussion Paper No. 14-089.

Mroz, T. A., and T. H. Savage. 2006. "The long-term effects of Youth Unemployment." *The Journal of Human Resources*, Vol. 41(2), 259–293.

Namiro, K., None, Chidiogo Uzoamaka Akpuokwe, and A. Udeh. 2024. "Theoretical Perspectives on Digital Divide and ICT Access: Comparative Study of Rural Communities in Africa and the United States." *Computer Science & IT Research Journal*, 5(4), 839–849. <https://doi.org/10.51594/csitrj.v5i4.1045>

Neagu, G., M. Berigel, and V. Lendzhova. 2021. "How Digital Inclusion Increase Opportunities for Young People: Case of NEETs from Bulgaria, Romania and Turkey." *Sustainability*, 13(14), 7894. <https://doi.org/10.3390/su13147894>

O'Dell, H. 2024. "1 in 5 young people around the world are NEETs. What are NEETs?" Globalaffairs.org, February 15. <https://globalaffairs.org/bluemarble/why-youth-neets-rise-worldwide-mental-health-cost-of-living>

OECD (Organisation for Economic Co-operation and Development). 2014, *Employment Outlook*, OECD Publishing, Paris.

Osei, D.B. 2024. "Digital infrastructure and innovation in Africa: Does human capital mediate the effect?" *Science Direct*. <https://www.sciencedirect.com/science/article/pii/S0736585324000157>

Oyedemi, T. 2014. "Beyond access: Youth and digital skills." *Communicatio*, 40, 137–154. <https://doi.org/10.1080/02500167.2014.907191>.

Ozimek, A. 2020. "When Work Goes Remote." Social Science Research Network Electronic Journal. <https://doi.org/10.2139/ssrn.3777324>

Padayachee, A., F. Khanare, D. Louw, and N. Gcelu. 2022. "An Intersectionality Perspective on Rural Adolescent Access to Digital Technology in South Africa." In *Impact and Role of Digital Technologies in Adolescent Lives*, edited by Shaveta Malik, Rohit Bansal, and Amit Kumar Tyagi, 35–50. Hershey, Pa: IGI Global. <https://doi.org/10.4018/978-1-7998-8318-0.ch004>.

Ramos, R. 2019. "Migration aspirations among youth in the Middle East and North Africa region." *Journal of Geographical Systems*, 21(4), 487–507. <https://doi.org/10.1007/s10109-019-00306-1>

Saran, A., H. White, and H. Kuper. 2020. "Evidence and gap map of studies assessing the effectiveness of interventions for people with disabilities in low-and middle-income countries." *Campbell Systematic Reviews*, 16(1). <https://doi.org/10.1002/cl2.1070>

Sarvi, J., V. Balaji, and H. Pillay. 2015. "Public-private partnerships in information and communication technology for education." ADB Briefs, 49. Asian Development Bank, Mandaluyong, Philippines.

Schmidt, J., and C. Stork. 2008. "Towards evidence based ICT policy and regulation: e-skills." *Research ICT Africa*, Vol. 1, Policy Paper 3.

Schmillen, A., and M. Umkehrer. 2013. "The scars of youth: effects of early-career unemployment on future unemployment experience." IAB Discussion Paper, 6/2013. Institute for Employment Research, Nuremberg.

Schumacher, P., and J. Morahan-Martin. 2001. "Gender, Internet and computer attitudes and experiences." *Comput. Hum. Behav.*, 17, 95–10. [https://doi.org/10.1016/S0747-5632\(00\)00032-](https://doi.org/10.1016/S0747-5632(00)00032-)

Sharp, M. 2022. "Revisiting digital inclusion: A survey of theory, measurement and recent research." Oxford: Global Development Institute, University of Manchester and Blavatnik School of Government & Centre for the Study of African Economies, University of Oxford. Available at: <https://www.bsg.ox.ac.uk/sites/default/files/2022-04/Revisiting%20digital%20inclusion-%20A%20survey%20of%20theory%2C%20measurement%20and%20recent%20research.pdf>

Silver, Laura, and Courtney Johnson. 2018. "Internet use is growing across much of sub-Saharan Africa, but most are still offline." Pew Research Center, Washington, DC. <https://www.pewresearch.org/global/2018/10/09/internet-use-is-growing-across-much-of-sub-saharan-africa-but-most-are-still-offline/>

Sulla, Victor, Precious Zikhali, Pablo Facundo Cuevas. 2022. *Inequality in Southern Africa: An Assessment of the Southern African Customs Union* (English). Washington, DC: World Bank Group. <http://documents.worldbank.org/curated/en/099125303072236903/P1649270c02a1f06b0a3ae02e57eadd7a82>

Tunji-Olayeni, P. F., E. Osabuohien, I. Yabkwa, and A. Ademola. 2021. "Youth Employment Creation as an Inclusive Solution for Sustainable Development: Lessons from the 'Double You Digital Skills Initiative' in Nigeria." *IOP Conference Series: Earth and Environmental Science*, 665(1), 012019. <https://doi.org/10.1088/1755-1315/665/1/012019>

Tustin, D. H. 2012. "Digital divide and inequality among digital natives: A South African perspective." *African Journal of Business Management*, 6(31). <https://doi.org/10.5897/ajbm11.2228>

UNDP (United Nations Development Programme). 2023. *Digital entrepreneurship in Africa*. UNDP Istanbul International Center for Private Sector in Development. https://www.undp.org/sites/g/files/zskgke326/files/2023-11/de_in_africa_final.pdf

UNCTAD. 2022. UN list of least developed countries. United Nations. <https://unctad.org/topic/least-developed-countries/list>

UNESCO Broadband Commission for Sustainable Development. 2017. "Recommendations for action: bridging the gender gap in Internet and broadband access and use."

<https://broadbandcommission.org/Documents/publications/WorkingGroupDigitalGenderDivide-report2017.pdf>

UNESCO. 2019. “I’d blush if I could: Closing gender divides in digital skills through education.” <https://unesdoc.unesco.org/ark:/48223/pf0000367416>

United Nations. 2013. DEFINITION OF YOUTH. United Nations. <https://www.un.org/esa/socdev/documents/youth/fact-sheets/youth-definition.pdf>

United Nations. (n.a.). “Unlocking the Power of Digital Technologies to support learning to earning for displaced youth.” <https://www.unicef.org/media/106476/file/%20Learning%20to%20earning%20%E2%80%99%20for%20displaced%20youth.pdf>

United Nations. 2017. Least Developed Countries (LDCs) | Economic Analysis & Policy Division. Development Policy & Analysis Division | Dept of Economic & Social Affairs | United Nations. <https://www.un.org/development/desa/dpad/least-developed-country-category.html>

United Nations Children’s Fund. 2021. “Unlocking the Power of Digital Technologies to Support ‘Learning to Earning’ for Displaced Youth.” UNICEF, New York, 2021.

Wang, D. et al. 2023. “Access to digital media and devices among adolescents in sub-Saharan Africa: A multicountry, school-based survey.” *Maternal and Child Nutrition*. April 4.

Wentrup, R., P. Ström, and H. R. Nakamura. 2016. “Digital oases and digital deserts in Sub-Saharan Africa.” *Journal of Science and Technology Policy Management*, 7(1), 77–100. <https://doi.org/10.1108/jstpm-03-2015-0013>

World Bank Group. (n.d.). *Digital Transformation Drives Development in Africa*. Washington, DC: World Bank Group. <https://www.worldbank.org/en/results/2024/01/18/digital-transformation-drives-development-in-afw-africa>

World Bank. 2021. *Demand for Digital Skills in Sub-Saharan Africa: Key Findings from a Five-Country Study—Côte d’Ivoire, Kenya, Mozambique, Nigeria, and Rwanda*. Washington, DC: World Bank Group. <http://documents.worldbank.org/curated/en/099614312152318607/IDU0b36e9e030767f0417e0afb806e2ffdf1e8bf>

Yoon, C. 2019. “Digital Africa: An Analysis of Digital Trends in Africa and Their Driving Factors.” *Southern Space Studies*, 109–133. https://doi.org/10.1007/978-3-030-32930-3_9

Zablocki, M., and M. P. Krezmien. 2012. "Drop-Out Predictors Among Students With High-Incidence Disabilities: A National Longitudinal and Transitional Study 2 Analysis." *Journal of Disability Policy Studies*, 24(1), 53-64. <https://doi.org/10.1177/1044207311427726>

Zamfir, A.-M., and A. B. Aldea. 2020. "Digital Skills and Labour Market Resilience." *Postmodern Openings*, 11(1Sup2), 188–195. <https://doi.org/10.18662/po/11.1sup2/151>

Zhang, Y., W. Zhang, and J. Wang. 2024. "Effect of digital skills on citizens' digital participation: mediating effects of political interest, social issues concern and national identity." *Kybernetes*. <https://doi.org/10.1108/k-08-2023-1567>

ABSTRACT

This background paper examines the critical issue of how to enhance digital skills among youth who are not in employment, education, or training (NEET) in Africa to prevent approximately 72 million young people (two-thirds of whom are young women) from being marginalized in a global economy rapidly undergoing a digital transformation.

First, it evaluates the current digital proficiency of the region's NEET population and identifies substantial structural barriers that contribute to widening digital disparities. Subsequently, the paper explores the transformative potential of digital skills in boosting employability, fostering entrepreneurship, and enabling broader participation in socioeconomic life.

Crucially, it then proposes scalable, cost-effective strategies, including public-private partnerships, mobile-first education initiatives, and community-based training programs.

These approaches are assessed for their practicality (cost effectiveness and scalability) and for their potential to equip Africa's NEET youth with the necessary digital competencies. If adopted at scale, these competencies can enable young people to join the economic mainstream and help translate Africa's demographic potential into widespread social and economic gains.

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