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Advancing Lifelong Learning for Workforce Development in Nigeria: Addressing Skills Gaps and Technological Disruptions in the Digital Era

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Abstract: *Lifelong learning is increasingly recognized as a critical strategy for workforce resilience in the context of automation, artificial intelligence, and digital economies. In Nigeria, rapid population growth, high levels of informal employment, and expanding digital markets intensify the need for systematic approaches to workforce development. This paper examines the role of lifelong learning in addressing Nigeria's workforce challenges, focusing on skills gaps, technological disruptions, and opportunities for inclusive economic transformation. It aims to assess existing initiatives, highlight challenges, and propose actionable strategies.The study employs a conceptual and policy analysis approach, drawing on global frameworks (UNESCO, OECD, ILO) and Nigeria-specific evidence. Case studies of Andela, Decagon, Lagos State Employment Trust Fund (LSETF), and NITDA's Coursera partnership are used to illustrate practical models of lifelong learning in action. Findings reveal persistent skills mismatches, inadequate recognition of informal learning, infrastructural deficits, and fragile private training models. However, successful interventions demonstrate the potential of blended learning hubs, micro-credentials, employer partnerships, and digital platforms to expand access and improve employability. Institutionalizing a coherent lifelong learning framework anchored on recognition of prior learning, sustainable financing, labour-market intelligence, and inclusive delivery models is essential for translating Nigeria's demographic dividend into productive and equitable workforce outcomes. Strategic public–private partnerships and targeted inclusion policies will be central to success.*

Keywords: *Lifelong learning, workforce development, skills gaps, digital economy*

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Introduction

Lifelong learning the continuous acquisition, updating, and application of knowledge and skills across the lifespan has become indispensable in contemporary economies, particularly in an era defined by rapid automation, artificial intelligence (AI), and platform-based employment models (OECD, 2021; Schwab, 2017). The accelerating pace of technological innovation is reshaping labour markets globally, demanding new competencies while simultaneously rendering others obsolete. In this context, the concept of "learning to learn" has become central to workforce resilience, ensuring that individuals can adapt to emerging occupational demands and remain productive contributors to national development (UNESCO Institute for Lifelong Learning [UIL], 2022).

For Nigeria, the urgency of advancing lifelong learning is acute. The country has one of the

largest youth populations in the world, with approximately 70% of its citizens under the age of 30 (United Nations, 2023). This demographic dividend, if well harnessed, offers a transformative potential for economic growth and innovation. However, structural challenges, including high youth unemployment and underemployment, pervasive informality, and skills mismatches, pose significant risks of social instability and lost economic opportunity (National Bureau of Statistics [NBS], 2024; World Bank, 2023). Informal employment still accounts for more than 80% of total jobs, with limited pathways for skills recognition or structured upskilling (International Labour Organization [ILO], 2020).

The country's digital economy is expanding rapidly, with sectors such as fintech, e-commerce, and digital services demonstrating significant growth potential. Nigeria's National Digital Economy Policy and Strategy (NDEPS) 2020–2030 envisions digital transformation as a key lever for economic diversification and resilience (National Information Technology Development Agency [NITDA], 2020). Yet, translating digital adoption into broad-based employment gains requires robust lifelong-learning systems that extend beyond initial formal education to encompass adult education, technical and vocational education and training (TVET), micro-credentialing, and workplace learning (Okolie et al., 2021). Without such systems, digital transformation risks deepening inequality by benefiting only a small segment of digitally literate and urban-based workers while excluding rural populations, women, and those in low-income groups (Akinwale, 2022).

Recent diagnostics reveal persistent gaps in workforce readiness. Employers frequently cite deficits in both digital skills (e.g., coding, data literacy, cybersecurity) and soft skills (e.g., teamwork, problem-solving, adaptability), highlighting a disconnect between higher education curricula and labour-market requirements (TechCabal Insights, 2025; British Council, 2021). For example, the World Bank (2023) identifies Nigeria's digital skills gap as a significant barrier to competitiveness, estimating that only 27% of Nigerian youths possess even basic digital literacy. Moreover, the mismatch between graduate competencies and employer expectations contributes to a paradox of simultaneous graduate unemployment and employer difficulty in filling high-skill vacancies (Okolie & Igwe, 2021).

Addressing these challenges requires a paradigm shift in skills development. A lifelong-learning framework ensures that workers can continuously reskill and upskill in response to evolving technological and economic trends. Such frameworks also align with global Sustainable Development Goals

(SDG 4.4), which emphasize the importance of equipping youth and adults with relevant skills for employment, decent jobs, and entrepreneurship (United Nations, 2015). For Nigeria, embedding lifelong learning in workforce development policies is not only a strategy for closing immediate skills gaps but also a pathway toward inclusive, sustainable growth in the digital era.

Lifelong Learning

Lifelong learning refers to the continuous, voluntary, and self-motivated pursuit of knowledge and skills throughout an individual's life for personal, civic, social, and employment-related purposes. It is not confined to formal schooling but spans non-formal and informal learning processes that occur across various life stages (Aspin & Chapman, 2001; UNESCO, 2016). The concept acknowledges that in a rapidly changing global environment driven by technological innovation, shifting labor markets, and demographic dynamics learning cannot be limited to early life stages but must extend across the lifespan. The idea of lifelong learning emerged prominently in the 1970s when the Faure Report by UNESCO (1972) introduced the notion of "learning to be," highlighting education as a lifelong process that fosters both personal and social development. Later, the Delors Report (UNESCO, 1996) reinforced this by identifying four pillars of learning: learning to know, learning to do, learning to live together, and learning to be. These reports framed education as central to individual empowerment and collective progress, shaping contemporary understandings of lifelong learning.

Dimensions of Lifelong Learning

Lifelong learning encompasses three main dimensions:

1. **Formal Learning** – structured programs in schools, universities, or training institutions that lead to certification.
2. **Non-Formal Learning** – organized programs outside formal systems, such as vocational training, community education, or professional courses.
3. **Informal Learning** – experiential, unstructured learning through daily activities, work, or social interaction (OECD, 2007; Jarvis, 2009).

This tripartite structure ensures that lifelong learning captures diverse learning experiences and contexts, recognizing that valuable skills and competencies are acquired beyond classrooms.

Lifelong Learning in the Digital Era

Globalization and digital transformation have expanded the scope of lifelong learning to include digital literacy, adaptability, and problem-solving. The rise of automation and artificial intelligence requires workers to reskill and upskill continuously to remain employable (Schleicher, 2019). Platforms such as Coursera, edX, and local initiatives in Nigeria (e.g., Andela and Decagon) exemplify how technology enables flexible and accessible lifelong learning opportunities.

Workforce Development

In exploring this notion, we start with two key observations. First, it is a relatively new concept, now increasingly being used by educationalists, policy makers and scholars. Hall and Lansbury (2006: 584) stated that the concept of workforce development first appeared in the mid-1990s when Harrison, Weiss and Gant (1995) differentiated between 'employment training', which they claimed focuses on the skills supply side, and 'workforce development', which seeks to incorporate the nature of employer demand. Their conception of workforce development extended the notion beyond training to include human resource management and development activities, including collaborations with other organisations, recruiting, job matching, mentoring and retention (Harrison and Weiss 1998). A decade later, Comyn (2008a: 3–4) reported that, while the concept had yet to significantly influence policy dialogue in the European Union, at the national level many EU governments were adopting different policies in their attempts to move away from the low skills trap and instead focus on workforce development. He also commented on many other governments in the UK, Europe and Asia starting to use the term in their policy dialogue, with the most influence in the UK, particularly through the workforce development initiatives of the UK Learning and Skills Council.

One of the first acknowledged uses in Australia was by the Government of South Australia, which adopted the term in 2003 as the overarching concept for its strategy to raise the quantity and quality of skills in the State. In the final report of the Ministerial Inquiry, *Skills for the future*, workforce development was defined as *those activities which increase the capacity of individuals to participate effectively in the workforce throughout their whole working life and which increase the capacity of firms to adopt high performance work practices that support their employees to develop the full range of their potential skills and value. (Government of South Australia 2003: 7)*

Thus, workforce development is perceived here as activities that build the capacity of both individuals and companies. The Inquiry believed that new language can capture and

reflect new ideas, change mindsets and transcend organisational boundaries, and that the existing language of 'education and training', 'VET' and even 'skills formation' was not adequately capturing the skills dynamics in the contemporary world of work where skill content is changing and where skills are being developed formally and informally in multiple contexts and through multiple pathways. Workforce development was therefore chosen for the three reasons that it recognises the links between skill and the way work is organised, it is a cross-cutting issue and it is a simple, accessible and marketable term meaningful to industry, the community and education and training institutions alike (Government of South Australia 2003: 20).

On the national stage, Skills Australia, established in 2008 and relabelled the Australian Workforce and Productivity Agency only in July 2012, is an independent statutory body that provides advice to the Australian government on current, emerging and future workforce skills and workforce development needs. This body published its inaugural National Workforce Development Strategy, *Australian workforce futures*, as recently as March 2010, and its second, *Future focus*, in March 2013. These strategies recommended a fundamental overhaul of the way the nation approaches and supports workforce development – at a national, industry and enterprise level. So the concept (even if not the practice) is new at a national level, at least in Australia.

Second, the concept extends beyond the training of individuals. The Australian Workforce and Productivity Agency officially now defines workforce development as those policies and practices which support people to participate effectively in the workforce and to develop and apply skills in a workplace context, where learning translates into positive outcomes for *enterprises*, the *wider community* and for *individuals* throughout their working lives. (Skills Australia 2010: 67, emphasis added)

There is clearly an emphasis here on both policies and outcomes, with learning at the levels of individuals, companies and society. In fact the sequencing of the three beneficiaries of this learning may well be significant – the furnishing of organisational and societal benefits *before* individual ones. These definitions lead us to recognise, therefore, that there are different perspectives on workforce development.

There are at least five main perspectives. The most visible and clearly understood is the perspective of the *individual*. The danger of exclusively concentrating on this perspective on workforce development is it can so readily lead

to a resumption (or maintenance) of the narrow interpretation of the concept as training. A second perspective is the *organisational*, within which employers focus on the skills their business needs to remain competitive in the global marketplace. Third is the *industry* perspective, where companies within a particular industry may strive for harmonisation for such purposes as reducing costs through sharing of resources and/or maintaining viability of their industry. A fourth perspective is the *community or region*, which community and economic developers and mayors may invoke with regard to the sustainable economic growth of their towns and/or regions (Haralson 2010). At the broadest level is the *societal* perspective, which national governments have in mind when they are developing national workforce development strategies (such as the two published by Skills Australia in 2010 and the Australian Workforce and Productivity Agency in 2013), or establishing fresh targets for raising the educational levels of their citizenry (such as those set by the Council of Australian Governments in its National Agreement for Skills and Workforce Development from 2009). Thus, people operating in different spheres of a society and economy are highly likely to perceive the concept of workforce development, like the blind people feeling the elephant, in very different ways and arrive at very different interpretations. The capacity to reconcile different sets of goals across these many perspectives, according to Haralson (2010: 2), will become the defining feature of any integrated workforce development strategy. According to the Aspen Institute, this implies a comprehensive approach to workforce development involving substantial employer engagement, deep community connections, career advancement, human service supports, industry-driven education and training, and the connective tissue of networks. The chapters in this book focus primarily on the organisational, with some reference also to the individual and industry perspectives.

To many the world seems increasingly complex, uncertain and 'messy', and the contexts in which we live and work are often experienced as unstable and constantly shifting. This is being felt particularly after, and in someplaces still within, the global financial crisis. In dealing with and in making meaning of such a world and in particular its workplaces, there is a need to lift our gaze and shift focus more to learning than training, more to learners than instructors and more to whole organisations than training departments. This will then begin to lead us towards an understanding of what workforce development means.

With the need for agile organisations and adaptable workforces, the search continues for new ways of thinking and acting. Indeed, training professionals are increasingly being required to understand the broader context in which they operate, as workforce development seeks to bridge individual, organisational and societal interests in ways that are meaningfully and mutually beneficial. For example, evaluation theorists, such as Kirkpatrick and Kirkpatrick (2006), draw our attention to the need to go beyond the first level of post-course opinions ('happy sheets') what we might call the 'spray and pray' approach – to understand the impacts of training programs at the deeper levels of knowledge acquisition, behavioural change in the work environment and longer-term effects on the whole organisation. Curriculum theorists, such as Glatthorn, Boschee and Whitehead (2008), alert us to the fact that there are various 'shades' of curriculum, and that there are often serious disjunctures between the 'planned', the 'taught', the 'learned' and the 'assessed' curricula that require our urgent attention. Workplace learning theorists, such as Illeris (2011), and Hager and Hodkinson (2009), highlight the problems in assuming transfer of learning between training room and the workplace and how transfer, in fact, may be a totally inappropriate metaphor for thinking about most learning, especially vocational learning. Proponents of social learning, such as Wenger (1998), remind us about situated learning and how much of our learning derives from social participation in the workplace that involves not merely engagement in activities, but being active participants in the *practices* of social communities and constructing *identities* in relation to these communities – with participation in work teams as a key example. And critical theorists, such as Bratton et al. (2008), constantly prick our consciences to challenge the assumptions underlying workplace learning and to pose the difficult questions, like 'who benefits from workplace learning?', 'what kind of learning is valued in the workplace?', 'who is included (or excluded) from workplace learning opportunities?' and 'from the standpoint of the disadvantaged, what can be done about it?'.

Change, in this case from a training to a wider workforce development perspective, takes time. We cannot expect instant adoption – new skills, effecting shifts in policies and practices, and the building of mutual trust need considerable patience. In fact, March and Olsen (1983) suggested that the role of a change agent is more like a gardener than an engineer: it takes time to cultivate and bear fruit. In his extensive overview of the literature on workforce skills and innovation for the OECD, Toner (2010) concluded as one of his major findings that the predominant form of innovation in firms is

incremental, which highlights the key role of the broader workforce in the generation, adaptation and diffusion of technical and organisational change. The ferment of change over the past couple of decades has seen considerable restructuring by organisations as they undergo massive cultural change, strive to transform their organisational character and search for competitive advantage. Changes to work and the organisation of work have tended to shift the emphasis from individual competence to organisational capability, for which workforce development is a critical vehicle. Yet the meaning of organisational capability itself remains opaque, there is a deal of confusion in the literature and there do not yet appear to be accepted ways in which to define such concepts (Harris 2007). So it is hardly surprising that a lack of clarity and consistency persists. Is it any wonder that there remains 'a rather thick terminological haze over the landscape where capability lies' (Winter, quoted in O'Regan and Ghobadian 2004: 293)?

From a distillation of definitions of organisational capacity, the following is a succinct and useful one: 'organisational capability refers to an organizational ability to perform a coordinated task, utilizing organisational resources, for the purpose of achieving a particular end result' (Helfat 2003: 1). Yet the issue of resources is an interesting one. Organisations have unique resources, and they are not productive in themselves – they need to be translated into capabilities by being managed and coordinated. So it is how the resources are used that largely determines performance differences in organisations. These resources include: (a) the tangible: financial, physical, (b) the intangible: technology, reputation, culture, and (c) the human: specialised skills and knowledge, communication and interactive abilities, motivation (OpenLearn 2006). Haertsch (2003: 1) has written about the alignment of three different forms of capital. What is 'central to the building of the organisation's capability' is the combination of human capital (people skills and knowledge), social capital (relationships between people) and organisational capital (the organisation's processes), and aligning them such that each supports the others. While the concept of organisational capability remains elusive, there are a number of elements that can be identified – like pieces jumbled in a jigsaw box. The trick is to (re)configure the various elements into a shape that 'fits' the unique environment of any particular organisation. Within that mix, the jigsaw piece that is workforce development forms an essential component of the overall picture.

Lifelong Learning and Workforce Development in Nigeria

Lifelong learning — continuous, flexible learning across the life course — is the critical policy lever that will allow Nigeria to translate its demographic and digital potential into inclusive growth. Nigeria's digital economy is expanding and government strategy sets ambitious targets, but persistent skills mismatches, a dominant informal sector, and infrastructure gaps limit the workforce's ability to benefit. Scalable approaches (micro-credentials, recognition of prior learning, public–private training partnerships, community learning hubs, and data-driven labour-market intelligence) combined with financing reforms (skills levies, blended finance, ISAs) can accelerate reskilling and bridge the gap between education supply and employer demand. Successful examples in Nigeria (Andela, Decagon, Lagos State Employment Trust Fund) and partnerships with global platforms (Coursera + NITDA) illustrate both potential and practical constraints to scale.

Nigeria's Demographic Dividend

Nigeria's population dynamics shape both the urgency and the opportunity for advancing lifelong learning. According to the United Nations (2023), nearly 70% of Nigerians are under the age of 30, and by 2050, the country is projected to become the third most populous nation in the world, surpassing 400 million people. This youthful demographic profile has been widely framed as a potential economic advantage—commonly referred to as a demographic dividend—if the labour force is adequately educated, skilled, and integrated into productive employment.

However, the demographic dividend is not automatic. Nigeria continues to struggle with high unemployment and underemployment rates, particularly among youth and graduates. The National Bureau of Statistics (2024) reports that while overall unemployment is volatile due to changing survey methodologies, underemployment and precarious informal work remain entrenched realities. Youth unemployment rates in urban centres are often significantly higher than national averages, reflecting both inadequate job creation and mismatches between graduate competencies and labour-market demands (Afrobarometer, 2025). If not addressed, these dynamics risk turning the youth bulge into a demographic liability, fuelling disillusionment, poverty, and social unrest.

Harnessing the demographic dividend requires a deliberate investment in human capital, including not just formal schooling but lifelong-learning opportunities that allow individuals to continuously reskill and adapt to changing economic conditions. This is particularly important as many young Nigerians enter the workforce without the digital and

entrepreneurial skills necessary for success in a globalized, technology-driven economy (Okolie & Igwe, 2021).

The Digital Economy Opportunity

Parallel to demographic change is the rapid growth of Nigeria's digital economy. The proliferation of fintech, e-commerce, logistics platforms, and ICT-enabled services has positioned Nigeria as a digital hub in Africa. In 2021, the country's digital sector contributed approximately 18% to gross domestic product (GDP), outpacing traditional sectors such as oil and gas in relative growth (NITDA, 2020). This expansion underscores the potential of technology to drive diversification, job creation, and innovation.

The Federal Government of Nigeria, through the National Digital Economy Policy and Strategy (NDEPS) 2020–2030, has articulated a vision for transforming the country into a leading digital economy, anchored on pillars such as digital infrastructure, skills development, and innovation (National Information Technology Development Agency [NITDA], 2020). Similarly, initiatives like the National Broadband Plan and investments in start-up ecosystems are designed to accelerate digital inclusion and competitiveness.

Yet, the promise of the digital economy is conditional on the availability of a digitally literate workforce. Current assessments reveal a wide skills gap: many Nigerian workers lack even basic ICT competencies, while employers in the technology and services sectors struggle to fill positions requiring advanced digital skills such as software engineering, data analytics, and cybersecurity (TechCabal Insights, 2025; World Bank, 2023). Inadequate lifelong-learning frameworks to address these deficits threaten to constrain Nigeria's digital transformation, leaving large segments of the population excluded from emerging opportunities.

Persistent Skills Gaps

One of the most pressing challenges for Nigeria's workforce development is the persistent gap between the skills demanded by employers and those supplied by the education and training system. This mismatch manifests in several dimensions.

First, digital skills deficits are widespread. The World Bank (2023) estimates that only about 27% of Nigerian youths possess basic digital literacy, while advanced digital competencies are even less common. Employers report difficulties recruiting workers with sufficient proficiency in programming, cloud computing, and digital marketing, even as demand for these skills continues to grow rapidly in the private sector (Okolie et al., 2021).

Second, soft skills such as communication, teamwork, adaptability, and problem-solving are also lacking among graduates. A British Council (2021) review of Nigeria's Technical and Vocational Education and Training (TVET) system revealed that employers often consider graduates technically competent but deficient in workplace-relevant behavioural and interpersonal attributes.

Third, the structure of Nigeria's higher education and TVET institutions exacerbates the mismatch. Curricula are often outdated, theoretical, and disconnected from the fast-evolving needs of industry (Okolie & Igwe, 2021). Limited partnerships between educational institutions and employers hinder experiential learning opportunities such as internships, apprenticeships, and cooperative education. As a result, graduates frequently find themselves ill-prepared for practical job requirements, while employers incur additional costs for on-the-job training.

These gaps are not unique to Nigeria but reflect broader challenges across sub-Saharan Africa, where education systems are struggling to align with the demands of the Fourth Industrial Revolution. However, Nigeria's scale, population, and economic potential make addressing the skills mismatch particularly critical for both national development and regional competitiveness.

Lifelong Learning as a Strategic Response

Given these dynamics, lifelong learning emerges as a strategic necessity for Nigeria's workforce development. Unlike traditional education systems that front-load learning during childhood and youth, lifelong learning recognizes that skills must be continuously updated and expanded across the life course. This is especially relevant in the digital era, where the half-life of technical skills is estimated at less than five years (OECD, 2021).

International frameworks emphasize the transformative potential of lifelong learning. The Sustainable Development Goals (SDG 4.4) call for substantially increasing the number of youth and adults with relevant skills for employment, decent jobs, and entrepreneurship by 2030 (United Nations, 2015). Similarly, UNESCO's Fifth Global Report on Adult Learning and Education (GRALE 5) underscores that adult and lifelong education is critical for employability, social cohesion, and civic engagement (UNESCO UIL, 2022).

For Nigeria, adopting a lifelong-learning framework involves reimagining education not as a one-time event but as a continuum encompassing formal, non-formal, and informal modalities. This includes:

- Expanding competency-based TVET that integrates digital skills and workplace learning.
- Developing micro-credentialing systems that allow workers to acquire, update, and stack skills flexibly.
- Recognizing and certifying skills acquired through informal and non-formal channels.
- Leveraging digital platforms to reach underserved populations while ensuring affordability and accessibility.

Such an approach aligns not only with global best practices but also with Nigeria's aspirations to diversify its economy, reduce unemployment, and strengthen resilience in the face of technological disruptions.

Addressing Skills Gaps and Technological Disruptions in The Digital Era

Technological disruption driven by automation, artificial intelligence (AI), robotics, and platform economies is rapidly reshaping the nature of work worldwide. For Nigeria, these shifts intersect with persistent skills mismatches, weak formal training systems, and limited labour-market adaptability. Addressing these challenges requires a multi-pronged approach involving government, educational institutions, private sector actors, and communities.

1. Strengthening Foundational and Digital Skills: A major barrier to workforce readiness in Nigeria is the deficit in basic literacy, numeracy, and digital competencies. According to the World Bank (2023), fewer than one-third of Nigerian youths possess foundational digital skills such as using productivity software, browsing online resources effectively, or basic data management. To address this: Integrate digital literacy into basic education Schools at all levels should embed ICT use, coding, and problem-solving skills into the curriculum (Okolie & Igwe, 2021). Community-based digital hubs Public libraries, vocational centres, and NGOs can be leveraged to provide free or subsidised ICT and digital training, particularly for underserved groups (UNESCO UIL, 2022). National Digital Literacy Framework Government-led policies should create standardised training benchmarks to ensure uniform digital skill competencies across regions.

2. Expanding Lifelong Learning Opportunities: Skills acquired during formal schooling are no longer sufficient for a lifetime career. Nigeria must promote flexible and inclusive lifelong learning models: Recognition of Prior Learning (RPL) Establish frameworks to formally certify skills gained informally,

particularly in Nigeria's large informal sector (ILO, 2020). Short-cycle professional training Promote bootcamps, MOOCs, and micro-credentialing in areas such as AI, cybersecurity, and renewable energy (Akinwale, 2022).Workplace-based upskilling Encourage firms to invest in continuous professional development, supported by tax incentives or subsidies.

3. Reimagining Higher Education and TVET Systems: Nigeria's universities and Technical and Vocational Education and Training (TVET) institutions often face criticism for producing graduates with weak employability skills (British Council, 2021). To realign them with labour market needs. Curriculum reforms Align courses with industry standards, particularly in STEM, ICT, and entrepreneurship (Okolie et al., 2021). Industry-academia partnerships Create collaborative platforms for co-designing curricula, internships, and apprenticeship opportunities (World Economic Forum, 2020). Competency-based education Shift from rote memorization to problem-solving, project-based learning, and innovation-driven pedagogy.

4. Leveraging Technology for Learning and Workforce Development: EdTech offers scalable solutions to bridge skills gaps Massive Open Online Courses (MOOCs): Platforms like Coursera, EdX, and locally designed systems can democratize access to in-demand skills. Mobile learning apps: Given Nigeria's high mobile penetration, mobile-first solutions can extend digital training to rural areas. Artificial Intelligence in training Adaptive learning platforms can tailor educational content to individual learners, enhancing efficiency.

5. Building Public-Private Partnerships (PPPs): Addressing technological disruption requires collaboration between government, businesses, and civil society corporate training investments: Multinationals and local firms should fund reskilling initiatives, not only for current employees but also for future workforce entrants. Sector-specific councils ICT, agriculture, energy, and manufacturing sectors should establish skill councils to anticipate technological trends and recommend training pathways. Funding mechanisms Skill-development levies, corporate social responsibility (CSR) initiatives, and donor support can strengthen resource mobilization.

6. Enhancing Labour Market Intelligence and Forecasting

Nigeria suffers from weak data systems to monitor evolving labour market demands. Without strong evidence, skills planning remains reactive. Solutions include. Labour market observatories Establish agencies to track employer demand, emerging occupations, and

regional skill shortages (ILO, 2020). Real-time data analytics Use AI-driven tools to track online job postings and identify skill trends (OECD, 2021). National skills inventory Develop a centralised repository of existing workforce competencies to match them against projected industry needs.

7. Addressing Equity and Inclusion in Skills Development : Technological disruption risks deepening inequality if access to reskilling is uneven. Policies must deliberately target marginalized groups Gender-responsive programs Provide scholarships and mentorship for women in STEM and digital entrepreneurship (Akinwale, 2022). Rural digital inclusion: Expand broadband and digital infrastructure in rural communities to bridge urban-rural divides. Support for informal workers Create modular, flexible training tailored to artisans, traders, and gig economy workers.

8. Policy and Governance Framework: Finally, Nigeria requires robust policies to integrate these strategies into a coherent national skills-development ecosystem: Implementation of NDEPS 2020–2030 with stronger emphasis on human capital development. Skills councils and regulatory bodies: Establish clear roles for the National Universities Commission (NUC), National Board for Technical Education (NBTE), and Ministry of Labour in workforce reskilling coordination. Financing models: Set up lifelong-learning funds supported by government budgets, employer levies, and donor contributions. Addressing skills gaps and technological disruptions in Nigeria requires a systemic, inclusive, and future-oriented approach. It is not enough to expand digital infrastructure; people must be equipped to harness it. By prioritizing foundational and digital literacy, strengthening lifelong learning, reforming higher education, leveraging EdTech, and fostering public-private collaboration, Nigeria can build a workforce capable of thriving in the digital era. Equitable and forward-looking policies will ensure that digital transformation becomes a pathway to inclusive growth, rather than a source of exclusion and inequality.

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