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TECHNOLOGY-DRIVEN ADULT LEARNING AND ITS CONTRIBUTION TO SDG 8: DECENT WORK AND ECONOMIC GROWTH IN RIVERS STATE

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Abstract

This paper explores the pivotal role of technology-driven adult learning initiatives in fostering sustainable economic development and promoting decent work, directly contributing to the achievement of United Nations Sustainable Development Goal 8 (SDG 8). Focusing on the intersection of Adult Education, Technology in Education, and economic empowerment, the study develops a conceptual framework that links accessible and high-quality digital learning opportunities that will enhance employability, entrepreneurship, and productivity. Theories such as Andragogy human capital development and livelong learning theories and literature review were also were part of discussion in portraying the importance of the technologies. Global best practices from selected continents including Sub-Saharan Africa where part of the discus; the paper also analyzes how various forms of technology-mediated learning; facilitate skills acquisition, for reskilling, and upskilling among adult learners. Gaps, benefits of technology adult learning, strengths and weakness of policies and its implications were analyzed. Inherent challenges such as the digital divide and the need for robust economy.. Concrete suggestion was proposed to maximize the impact of technology-driven adult learning, particularly for marginalized communities and in the context of emerging economies like that of Rivers State that will ultimately advancing equitable and inclusive economic growth.

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Keywords: Technology-Driven Adult Learning, SDG 8, Decent Work, Economic Growth, Adult Education, Technology in Education, Digital Skills, Employability, Lifelong Learning, Quality Assurance

Introduction

Sustainable Development Goal 8 (SDG 8), established by the United Nations, emphasizes the need for inclusive and sustained economic growth, productive employment, and decent work opportunities for all. Achieving this vision requires a workforce that is both highly skilled and adaptable to changing global demands. Within this context, technology-enhanced adult education especially through Open and Distance Learning (ODL) emerges as a critical mechanism for equipping individuals with the competencies needed to succeed in the knowledge-driven economy of the 21st century (United Nations, 2015; UNESCO, 2023). This paper explore how technology-driven learning initiatives directly contribute to SDG 8 by enhancing employability, fostering entrepreneurship, and boosting productivity, ultimately promoting Decent Work and fostering sustainable Economic Growth. The discussion will critically examine the mechanisms through which this contribution is made, considering global best practices, contextualizing implications for nations like Nigeria, and proposing solutions to overcome existing barriers.

The rapid evolution of technology has transformed the landscape of adult learning, positioning it as a critical driver for achieving **Sustainable Development Goal 8 (SDG 8):** Decent Work and Economic Growth**.** Scholastic researches revealed that, in today's knowledge-based economy, the integration of technology in education, particularly through Open Distance Learning (ODL) has expanded opportunities for adults to access flexible, inclusive, and quality education through digital platforms and open educational resources due to its critical role in widening participation, enhancing employability, and fostering lifelong learning aligned with SDG 8 (Mishra & Panda, 2021; UNESCO, 2023).

This shift is especially relevant in this paper as in the case of Nigeria and Rivers State, where unemployment, underemployment, and skills mismatches remain pressing challenges. Adult learning, traditionally rooted in principles of lifelong and experiential education, has been redefined by digital innovations (United Nations Educational, Scientific and Cultural Organization (UNESCO) 2023). Studies emphasize that technology-enabled Open and Distance Learning (ODL) provides flexible pathways for the adults to reskill and upskill, addressing employability gaps and supporting inclusive economic growth in Nigeria (Okebukola, 2021; Adebayo & Ojo, 2021). Platforms such as Massive Open Online Courses (MOOCs)**,** mobile learning applications, and virtual classrooms now enable adults to acquire digital skills that enhance employability and adaptability in dynamic labour markets (UNESCO, 2023).

These skills are essential for navigating the Fourth Industrial Revolution, where automation, artificial intelligence, and digitalization are reshaping the world of work. The ideology of SDG 8 emphasizes inclusive and sustainable economic growth, full employment, and decent work for all. Adult learning enhanced by digital technologies plays a pivotal role in advancing economic growth and SDG 8. By equipping learners with market-relevant competencies, technology-driven education fosters productivity, stimulates innovation, and supports entrepreneurial development. Evidence from international policy studies confirms that such approaches strengthen employability and create resilient workforces capable of adapting to evolving labour markets (OECD, 2021; UNESCO, 2023). In Nigeria, ODL initiatives as those pioneered by the National Open University of Nigeria (NOUN) have expanded access to education for adults who are constrained by geography, financial limitations, or work commitments (Adebayo & Ojo, 2022). To Rivers State**,** the implications are significant. As a hub of Nigeria's oil and gas industry, the state faces economic vulnerabilities tied to dependence on extractive resources. Technology-driven adult learning offers pathways to diversify the economy by preparing adults for opportunities in ICT, renewable energy, agriculture, and creative industries. But significant gaps remain in infrastructure, policy alignment, quality assurance, inclusion and access, industry-academia collaboration, and digital literacy. Recent studies highlight both opportunities and challenges in integrating Open and Distance Learning (ODL) with vocational training and digital innovations (World Bank, 2021; UNESCO, 2023; Edu, Uwelegbewe, & Amachree, 2025; Chinna & Sunny, 2025).

Policy and Governance Gaps

While Nigeria has embraced ODL through institutions like NOUN, Rivers State lacks localized policies that fully integrate technology-driven adult learning into community development frameworks. Weak coordination between government, academia, and industry limits the scalability of ODL initiatives (Okebukola, 2021; Edu, Uwelegbewe, & Amachree, 2025).

Technology and Infrastructure Gaps

The digital divide persists due to inadequate ICT infrastructure, unreliable internet connectivity, and limited access to devices in rural communities. AI-driven and mobile learning platforms are emerging, but adoption remains slow in Rivers State compared to global best practices (Eke, 2025; World Bank, 2021).

Quality Assurance Gaps

Many adult learning programs lack standardized curricula aligned with labour market needs. The absence of robust monitoring and evaluation frameworks undermines the credibility of ODL certifications (UNESCO, 2023; Adebayo & Ojo, 2021).

Inclusion and Access Gaps

Marginalized groups (women, rural dwellers, low-income adults) face barriers in accessing ODL due to digital illiteracy and affordability issues. Post-COVID-19 transitions to hybrid learning exposed inequalities in access to digital platforms (Muriithi, 2021; Edu et al., 2025).

Industry-Academia Collaboration Gaps

Limited partnerships between industries and educational institutions in Rivers State hinder the co-creation of curricula that reflect emerging job markets (AI, cybersecurity, green technologies). Stronger collaboration is needed to align adult learning with labour market demands (Chinna & Sunny, 2025; World Economic Forum, 2023).

By bridging these gaps, ODL enhances workforce resilience, supports entrepreneurship, and promotes inclusive participation in the global economy (World Bank, 2021). Furthermore, quality assurance mechanisms are vital to ensure that technology-driven adult learning programmes meet international standards and remain relevant to labor market needs. This guarantees that adult education not only empowers individuals but also contributes meaningfully to national and regional economic growth. Thus, the background situates technology-driven adult learning as both a social necessity and an economic strategy for achieving SDG 8 in Nigeria and Rivers State. Technology-Driven Adult Learning refers to the use of digital platforms, online resources, and ICT tools to facilitate flexible, inclusive, and accessible learning for adults. This approach aligns with the principles of adult education, which emphasize self-directed, experiential, and problem-centered learning. By leveraging technology, adult learners can acquire digital skills that enhance their employability in modern labor markets increasingly shaped by automation and globalization (UNESCO, 2023). SDG 8 advocates for sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all. The ideology behind SDG 8 is that education and skills development are prerequisites for innovation, productivity, and equitable growth.

In this regard, technology-driven adult learning becomes a strategic tool for equipping adults with competencies that foster entrepreneurship, adaptability, and resilience in the workforce (World Bank, 2021). The concept of lifelong learning is central to this framework, recognizing that adults must continuously update their skills to remain relevant in dynamic economies. Technology facilitates lifelong learning by providing access to Massive Open Online

Courses (MOOCs), e-learning platforms, and mobile applications that deliver knowledge anytime and anywhere (Adebayo & Ojo, 2022).

Quality assurance frameworks therefore emphasize digital literacy, continuous faculty training, and learner support systems to ensure that adult learners acquire competencies that translate into decent work opportunities including aligning its credibility and its effectiveness with both national and international standards. Its learning outcome though, requires policies, performance-based funding, and robust monitoring mechanisms that guarantee the relevance of labour market demands, as inadequate resource allocation, poor ICT infrastructure, and weak evaluation systems undermine ODL quality, thereby limiting its impact on employability (Idiamini & Amaewhule, 2026).

Employability refers to the acquisition of relevant skills, competencies, and attitudes that enable learners to secure and sustain decent work. Technology-driven adult learning provides flexible, accessible, and inclusive opportunities for skill development, especially, among marginalized groups who face barriers to traditional education. By integrating digital platforms, competency-based curricula, and industry-aligned training, ODL enhances learners' employability and contributes to economic growth through workforce productivity. (Okebukola, 2021; UNESCO, 2023).

The importance of Technology-Driven Adult Learning can be referred back to the COVID-19 pandemic era that, accelerated the adoption of technology in adult education, highlighting the need for resilient and adaptive quality assurance mechanisms. Post-pandemic realities in Rivers State demonstrate that digital learning models, hybrid instructional approaches, and competency-based education are critical for sustaining employability outcomes (Edu, Uwelegbewe, & Amachree, 2025). Furthermore, grassroots innovations such as community-based learning hubs and vocational training initiatives have proven effective in bridging infrastructural and social gaps, thereby reinforcing both employability and quality assurance in adult education (Orlu & Ezechinnah, 2025).

That's the reason; The National Open University of Nigeria (NOUN) has adopted ODL policies to expand access to adult learners, particularly in ICT, business, and education. However, challenges such as inadequate infrastructure, low digital literacy, and policy gaps remain barriers to maximizing impact (Zeb-Obipi & Kpurunee, 2023). Thus, the need for Technology-Driven Adult Learning and Its Contribution to SDG 8: Decent Work and Economic Growth in Rivers State .

Theoretical Review

The theoretical foundation for Technology-Driven Adult Learning and Its Contribution to SDG 8: Decent Work and Economic Growth draws upon several key theories in adult education, economics, and development studies. These theories provide a lens through which the relationship between adult learning, technology, open distance learning (ODL), decent work, and economic growth can be understood, particularly within the Nigerian and Rivers State context due to its peculiar challenges and needs.

The Andragogy Theory (Knowles, 1980; updated in recent scholarship) remains central to adult learning. It emphasizes that adults are self-directed, motivated by relevance, and learn best when education is problem-centered and experiential. Technology-driven platforms such as MOOCs, (Massive Open Online Courses), mobile learning, and ODL (Open Distance Learning) systems align with andragogical principles by offering flexible, learner-centered environments

that empower adults to take ownership of their learning (UNESCO, 2023) suits the needs of the adult learner in Rivers State. **Human Capital Theory** (Becker, 1964) **p**rovides an economic rationale for adult learning. It posits that investment in education and skills development enhances productivity, employability, and economic growth.

This implies that, as adult learner empowers or upgrades his or herself of digital skills acquired through technology driven skill/knowledge, he or she significantly increase labour market competitiveness and contribute to national economic resilience (World Bank, 2021). In Rivers State, where unemployment and underemployment persist, technology knowledge will enabled adult education serve as a strategic investment in human capital, diversifying the economy beyond oil and gas.

Transformative Learning Theory (Mezirow, 1991) highlights how adult education fosters critical reflection, enabling learners to challenge assumptions and adapt to new realities. Technology-driven adult learning supports transformative processes by exposing learners to global knowledge networks, digital collaboration, and innovative problem-solving approaches. which is relevant to Sustainable Developmental Goal 8, as it encourages adults to embrace new forms of work, entrepreneurship, and sustainable practices (Adebayo & Ojo, 2022). **Lifelong Learning Theory** underscores continuous acquisition of skills across lifespan. In the digital era, lifelong learning is facilitated by ODL and technology, ensuring that, adults remain adaptable in rapidly changing labor markets.

This theoretical perspective aligns with SDG 8 that emphasis on sustained economic growth and decent work, as lifelong learning fosters workforce resilience and innovation (Zeb-Obipi & Kpurunee, 2023). Meaning that, a people living a dynamic space or world of work, and they can stay alive and relevant demands constant training (skilling and retraining or reskilling so as to fit into new knowledge or innovation.

Quality Assurance Frameworks in Education provides theoretical basis for ensuring that technology-driven adult learning meets international standards. Quality assurance ensures inclusivity, relevance that aligned with labour market needs, thereby guaranteeing that adult education contributes meaningfully to both individual empowerment and its economic desirable growth.

These theories collectively demonstrate that technology-driven adult learning is not only pedagogically sound but also economically strategic. By integrating andragogy, human capital, transformative learning, lifelong learning, and quality assurance, the theoretical framework positions adult education as a catalyst for achieving SDG 8: Decent Work and Economic Growth in Nigeria and Rivers State.

Literature Review

Scholars today, robustly supports the transformative potential of Technology in Education for Adult Learning, particularly concerning its impact on employability and economic development. The COVID-19 pandemic drastically accelerated the adoption of digital learning platforms, providing a wealth of data on the effectiveness and challenges of this modality. Studies consistently show that technology-driven adult learning enhances access to skills training, especially for those in remote areas or with limited time, directly addressing educational gaps (Adamu et al., 2023; Mishra & Panda, 2021).

The literature emphasizes that acquiring Digital Skills is no longer an option but a prerequisite for securing Decent Work in the modern economy. Research from the past five years highlights the

urgent need for adults to upskilling and reskilling in areas like data analytics, cybersecurity, artificial intelligence, and digital marketing to remain competitive (UNESCO, 2021; World Economic Forum, 2023). Technology-driven platforms, including Massive Open Online Courses (MOOCs), vocational training portals, and micro-credentialing programs, have emerged as crucial mechanisms for delivering these skills efficiently and at scale.

Challenges such as "digital divide" remains a significant barrier with disparities in internet access, device ownership, and digital literacy preventing many adults particularly, in developing countries from benefiting from these opportunities (Al-Samarraie et al., 2021). Furthermore. Quality Assurance in technology-driven adult learning is a continuous concern. Studies argue for robust accreditation processes, effective instructional design, and adequate learner support to ensure that online learning translates into meaningful learning outcomes and recognized qualifications (Sharma & Yadav, 2024). The absence of supportive Policy frameworks can further exacerbate these issues, hindering the widespread and equitable adoption of technology-driven adult learning strategies for achieving SDG 8: Decent Work and Economic Growth.

Contributions of Technology to Adult Learning

Technology in Education has profoundly reshaped the landscape of Adult Education, offering unparalleled contributions that directly align with the objectives of SDG 8: Decent Work and Economic Growth. These contributions are multi-faceted, ranging from enhancing accessibility to personalizing learning experiences and also:

Expanded Access and Flexibility: Technology breaks down geographical and temporal barriers, allowing adults to learn anytime, anywhere. Online platforms, mobile learning applications, and blended formats provide the flexibility needed for working professionals, parents, and individuals in remote areas to pursue education without disrupting their lives, significantly increasing Access to Education (UNESCO, 2023)

Personalized and Adaptive Learning: AI-powered learning systems and adaptive technologies can tailor content and pace to individual learner needs, strengths, and weaknesses. This personalization optimizes the learning process, making it more efficient and effective for adults with diverse backgrounds and prior knowledge, leading to better skill acquisition. (Chen, Chen, & Lin, (2020).

Access to Diverse and Up-to-Date Content: The internet provides immediate access to a vast repository of learning resources, including Open Educational Resources (OERs), MOOCs, and specialized vocational training programs. This ensures that adult learners can acquire the most current and relevant skills demanded by the evolving job market, crucial for securing Decent Work.(Wang, 2021)

Interactive and Engaging Learning Experiences: Beyond passive content consumption, technology facilitates interactive learning through simulations, virtual reality (VR), augmented reality (AR), gamification, and collaborative online tools. These engaging methods enhance comprehension, retention, and the application of skills, fostering deeper learning. (Radianti, Majchrzak, Fromm, & Wohlgenannt, 2020).

Development of Digital Skills: Engaging with technology-driven learning platforms inherently develops learners' digital competencies. This meta-skill is critical across all industries and roles, improving overall employability and contributing to a digitally literate workforce necessary for Economic Growth, (European Commission, 2022).

Cost-Effectiveness: While initial setup costs can be high, digital learning, especially through OERs and scaled online programs, can significantly reduce the per-learner cost of education, making it more affordable and sustainable for both individuals and governments, thus promoting wider Access to Education, (Okebukola, 2021).

Facilitation of Micro-credentialing and Just-in-Time Learning: Technology enables the delivery of short, focused courses and micro-credentials that allow adults to acquire specific skills quickly in response to immediate market demands. This "just-in-time" learning approach is highly efficient for reskilling and upskilling, directly supporting continuous professional development and employability (Oliver, 2021)

Sustainable Development Goal 8 (SDG 8): Ideology and Rationale

It benefits includes: **inclusiveness** and sustainable economic growth, employability, and decent work for all. Its ideology rests on the belief that education and skills development are prerequisites for productivity, innovation, and equitable growth. Technology-driven adult learning directly supports this by equipping learners with market-relevant skills and fostering entrepreneurship. Making him/her fit and useful to the society in which he/she belong.

The nexus between Technology Driven Adult Learning and SDG 8: Decent Work and Economic Growth are profound and multifaceted. This section elaborates on how digital learning interventions, directly fuel the objectives of this crucial Sustainable Development Goal.

Enhancing Employability and Lifelong Learning

Technology-driven platforms offer unparalleled opportunities for adults to acquire and update skills, making them more competitive in the job market. Online vocational training, professional certifications, and micro-credential programs provide flexible pathways for reskilling and upskilling in high-demand areas like IT, data science, digital marketing, and green technologies [World Economic Forum, 2023]. This continuous skill development fosters Lifelong Learning, ensuring individuals can adapt to technological shifts and maintain Decent Work throughout their careers. For instance, platforms like Coursera and edX partner with universities and industries to offer job-relevant specializations that directly lead to improved employment prospects.

Fostering Entrepreneurship and Innovation

By democratizing access to business education, entrepreneurial skills training, and digital tools, technology-driven adult learning empowers individuals to start and grow their own ventures. Online courses on business planning, digital marketing, financial management, and e-commerce equip aspiring entrepreneurs with the knowledge to create new jobs and stimulate local economies. Platforms that connect mentors with mentees or provide virtual incubation support further accelerate the entrepreneurial journey, contributing to diverse and inclusive Economic Growth. This is particularly impactful in contexts where formal employment opportunities are limited.

(İlhan, Ü. D. (2025), (Milana, Holford, Hodge, Waller & Webb.(2017) & Orunna, Adesoun & Alabi, (2025))

Increasing Productivity and Economic Output

A well-trained and digitally literate workforce is inherently more productive (Zeb-Obipi & Kpurunee, 2023). Technology-driven adult learning helps workers acquire not only specific job-related skills but also critical transversal competencies like problem-solving, critical thinking, and digital collaboration, all of which are enhanced through online learning environments (Al-Samarraie et al., 2021). This improved human capital translates into higher efficiency, innovation, and overall output for businesses and economies (Shafik, 2025; Sharma & Yadav, 2024). For instance, training programs using simulations or virtual labs can significantly improve operational skills, directly impacting productivity and driving sustainable economic growth (Li & Liang, 2024).

Economic Growth Promoting Inclusive Growth and Reducing Inequalities

Technology-driven adult learning has the potential to reach marginalized populations who have been historically excluded from traditional education, including women, persons with disabilities, rural communities, and low-income individuals (Adamu et al., 2023; Booker & Hogue, 2020). By providing accessible learning opportunities, through technology such disparities can be reduced in skill and income programmes, leading to more inclusive Economic Growth and contributing to the "leave no one behind" principle of the SDGs DG Knowledge Hub, 2025; Sharma & Yadav, 2024). Initiatives focused on digital literacy for vulnerable groups are crucial for ensuring they can participate in the digital economy and access Decent Work opportunities (Adebayo & Ojo, 2022; Kizito, 2022)

Global Best Practices in Technology Driven Adult Learning

Globally, technology-driven adult learning has become a cornerstone for advancing SDG 8: Decent Work and Economic Growth. Countries have adopted diverse programmes that integrate Open and Distance Learning (ODL), vocational training, and digital literacy initiatives to equip adults with market-relevant skills for better living and to meet sustainable development goal 8 by meanifully engaged in productive services (UNESCO, 2023) as discussed below

Europe (Germany, UK**):** in Germany's dual vocational training system blends online modules with workplace apprenticeships, ensuring adults acquire both theoretical and practical skills (Euler, 2017). The UK has expanded online reskilling platforms for adults transitioning into digital and green jobs (Department for Education, 2019)..

Asia region **(**Singapore, India**):** Singapore's Skills Future initiative that provides credits for adults to pursue online courses in emerging fields like AI and cyber security (Singapore SkillsFuture, 2020). India's National Skill Development Mission leverages ODL to train millions in ICT and entrepreneurship. The aim is to ensure that, a huge number of adult citizen are empowered with relevant skills to that will keep them marketable to their (Singapore SkillsFuture, 2020).

Micro-credentials and Skills-Based Learning:

Global leaders like Western Governors University (USA) and institutions, leveraging platforms like Coursera and edX that offer job focused micro-credentials and short course

specializations. These programs directly address employer needs, allowing adults to acquire specific, verifiable skills quickly, significantly improving their employability and securing Decent Work (Booker, & Hogue, 2020)

Industry-Academia Partnerships: Successful initiatives often involve collaborations between educational institutions and industries to co-create curricula that meet market demands. For example, Google and IBM offer professional certificate programs directly on platforms like Coursera, providing clear pathways to in-demand tech jobs and fostering Economic Growth through skilled labour (Coursera, 2020)

Blended Learning Models for Vocational Training: Many European vocational education and training (VET) systems use blended learning, combining online theoretical instruction with practical, hands-on components in workshops or workplaces. This approach optimizes learning efficiency and ensures practical competence, directly contributing to **Decent Work** (European Commission, 2020).

Germany Dual Vocational Training System Germany integrates online learning with workplace apprenticeships, ensuring adults acquire both theoretical and practical skills. This system has strengthened workforce adaptability and contributed to sustained economic growth by reducing youth unemployment and skills mismatch (Euler, 2017).

Singapore Skills Future Initiative Singapore provides credits for adults to pursue online courses in emerging fields such as AI, cybersecurity, and green technologies. This lifelong learning programme has enhanced employability and positioned Singapore's workforce for global competitiveness (SkillsFuture Singapore, 2020).

India National Skill Development Mission: India leverages ODL and digital platforms to train millions of adults in ICT, entrepreneurship, and vocational skills. This initiative has expanded access to education for marginalized groups, contributing to inclusive economic growth (National Skill Development Corporation, 2021).

Sub-Saharan Africa Best Practices

Kenya Ajira Digital Program: Ajira equips youth and adults with freelancing and digital economy skills, enabling participation in global online work. It has reduced unemployment and created new income streams, directly supporting SDG 8 targets of decent work and productivity (Muriithi, 2021).

South Africa National Open Learning System: South Africa integrates ODL with vocational training to address unemployment and skills gaps. By focusing on ICT and technical skills, the programme has improved employability and supported economic diversification (DHET, 2020).

Nigeria National Open University of Nigeria (NOUN) NOUN for instance has provided flexible access to adult learners, particularly in ICT, business, and education. It has expanded

opportunities for lifelong learning that has added value to the economic growth of both the state and country at large, though infrastructural challenges remain (Adebayo & Ojo, 2021).

Impacts on Economic Growth and SDG 8 are:

Employment Creation: Digital skills training reduces unemployment and underemployment. Evidence shows that ICT-based adult learning programs significantly improve employability and reduce joblessness in developing economies (World Bank, 2020).

Entrepreneurship Development: Online platforms foster small-scale enterprises and freelancing opportunities. Studies highlight that digital learning and e-commerce platforms enable adults to create micro-enterprises and freelance careers, boosting local economies (OECD, 2021).

Workforce Resilience: Adults adapt to technological disruptions and automation during and after their academic period. Research indicates that lifelong learning and reskilling initiatives strengthen workforce adaptability in the face of automation and digital transformation (ILO, 2020).

Inclusive Growth: Marginalized groups gain access to education and decent work opportunities. Open and Distance Learning (ODL) has been shown to expand access for women, rural populations, and disadvantaged groups, thereby promoting inclusive economic growth (UNESCO, 2023).

Implications for Nigeria and Rivers State

It will be of huge benefit to Nigeria, which will eventually translate into the State, if these practices are adopted. Adopting global best practices in technology-driven adult learning has the capacity to transforming the Nigerian economy by diversifying the economy beyond oil and gas into ICT, renewable energy, and creative industries (Adamu et al., 2023; Zeb-Obipi & Kpurunee, 2023). Furthermore, these practices can reduce unemployment by equipping adults with digital and entrepreneurial skills, while strengthening workforce adaptability in the face of automation and global competition (Al-Samarraie et al., 2021; Shafik, 2025). Ultimately, this approach empowers local communities by bridging educational gaps and fostering inclusive participation in the labor market (Adebayo & Ojo, 2022)

The above best practices are evidences that show or demonstrate how technology-driven adult learning remain a powerful enabler for SDG 8 by leveraging ODL and digital skills programmes in reducing unemployment, foster entrepreneurship, and drive sustainable economic growth.

In summary

Technology-Driven Adult Learning is therefore, not merely an educational trend but a powerful and indispensable instrument for achieving SDG 8: Decent Work and Economic Growth. Its capacity to democratize access to skills, foster continuous learning, and empower individuals to adapt to dynamic labor markets is unparalleled. For nations like Nigeria, leveraging Technology in Education within Adult Education is critical for transforming its youth into a productive workforce, stimulating entrepreneurship, and driving inclusive Economic

Growth. However, realizing this potential demands a deliberate and concerted effort to overcome significant barriers, particularly the pervasive digital divide, gaps in digital literacy, and the need for robust Quality Assurance that will support work and contribute meaningfully to community wellbeing and national prosperity.

Suggestions/Recommendations

To fully harness the transformative potential of Technology-Driven Adult Learning in advancing SDG 8: Decent Work and Economic Growth, particularly in contexts like Nigeria, the following suggestions are made:

Invest in Universal and Affordable Digital Infrastructure: Governments, in partnership with the private sector, must prioritize significant investment in expanding broadband internet access, especially in rural and underserved urban areas. This includes implementing subsidies for data and devices for low-income adult learners to bridge the Digital Divide

Launch a National Digital Skills Literacy Program for Adults: Develop and implement a comprehensive national program to equip all adults with foundational Digital Skills. These programs, delivered through community centers, public libraries, and existing Adult Education platforms, should be culturally relevant and offered in local languages, making Technology in Education accessible to all

Develop Contextually Relevant and Localized Content: Fund and incentivize the creation of high-quality, technology-driven learning content that is tailored to local industries, societal needs, and available in multiple Nigerian languages. Foster collaboration between ODL providers, local experts, and industry leaders to ensure content directly leads to skills for Decent Work and Economic Growth.

Strengthen Quality Assurance and Accreditation Frameworks for Online Learning: Establish and rigorously enforce specific national Quality Assurance standards for all technology-driven adult learning programs, including clear accreditation processes for online vocational training and micro-credentials. This ensures the credibility and recognition of qualifications in the job market

Strong Industry-Education Partnerships: Mandate and facilitate robust partnerships between educational institutions (including ODL providers) and industries to co-design curricula, offer practical training opportunities (e.g., virtual apprenticeships), and ensure that skills developed through Technology-Driven Adult Learning directly align with market demands for Decent Work.

Implement Comprehensive Learner Support Systems: All technology-driven adult learning programs must integrate robust academic, technical, and career support services. This includes dedicated online tutors, personalized mentorship programs, and counseling to address the unique challenges of distance learners and improve retention rates.

Formulate an Integrated National Policy for Technology-Driven Adult Learning: Develop a cohesive national Policy that unifies strategies for digital infrastructure, content

development, Quality Assurance, funding, and industry engagement within the context of Adult Education. This policy should explicitly link Technology-Driven Adult Learning to national economic development goals and SDG 8

Promote Micro-credentialing and Flexible Learning Pathways: Encourage the development and widespread adoption of micro-credentialing programs that allow adults to acquire specific, verifiable skills in short durations. This flexibility is crucial for rapid reskilling and upskilling in response to evolving labor market demands, fostering continuous Lifelong Learning.

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