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THE ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICTs) IN REDRESSING THE LEARNING POVERTY CRISIS IN NIGERIA

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ABSTRACT

This paper examined the role of Information and Communication Technologies (ICT) in mitigating the learning poverty crisis in Nigeria. It posited that the integration of ICT into the educational landscape represents a transformative shift in pedagogical approaches, an innovative revolution with significant potential to benefit both learners and educators in the pursuit of knowledge. The study begun by defining key constructs including learning, information and communication technologies, and the learning crisis. It subsequently analyzed the advantages and disadvantages of employing ICT in educational settings, alongside the associated challenges for learners. The paper also addressed the potential risks inherent in the intensive use of communication technologies, considering both the Nigerian context and broader global perspectives. Furthermore, it delineated the specific learning challenges within the Nigerian education system and proposes a strategic roadmap for addressing these hurdles to foster meaningful educational development.

Key Words: Information, Communication Technologies, Learning Crisis

INTRODUCTION

Learning poverty, characterized by a learner's inability to acquire foundational literacy and numeracy skills, presents a significant challenge in Nigeria and many parts of the world. Recognizing the urgency of this crisis, this paper focused on the potential role of Information and Communication Technologies (ICTs) as a transformative tool for overcoming educational deficits in Nigeria.

Defined broadly as a term encompassing activities related to gathering, organizing, storing, and disseminating information in textual, numerical, pictorial, vocal, or multimedia forms, ICTs leverage computers and telecommunications to facilitate distance learning and other educational applications (Abdulkareem, Olumoko & Jacob, 2022).

The integration of these technologies has revolutionized various sectors, including

education, and represents a pivotal shift in Nigeria's pedagogical landscape. This wind of change brings innovative approaches that promise to enhance the learning experience for both learners and educators, ultimately fostering improved knowledge attainment and outcomes.

To provide a comprehensive exploration of this subject, this paper first clarified key constructs, including Information and Communication Technologies themselves—highlighting specific tools and their benefits—and the nature of the learning crisis in Nigerian schools, including its root causes. The paper then critically examined the advantages and disadvantages of intensive ICT use, addressing concerns such as learner distraction through social chats, a perceived decline in writing and reading proficiency, and broader educational failures.

Finally, the paper dedicated significant attention to proposing a viable way forward to redress the learning crisis. This strategic roadmap, aligned with the objectives of Sustainable Development Goal (SDG) 4, encompasses essential measures such as infrastructure development, comprehensive teacher training, curriculum reform, and ensuring equitable access to digital resources.

USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICTS) IN REDRESSING THE LEARNING CRISIS IN SCHOOLS

The rapid proliferation of Information and Communication Technologies (ICTs) is fundamentally reshaping global societies, economies, and institutions. This transformation necessitates a decisive policy response to reconstruct and contextualize Nigeria's educational ecosystem in alignment with global best practices. Such realignment is critical for addressing the pervasive learning poverty crisis through the strategic integration of ICTs.

Over the past two decades, Nigeria's educational architecture—encompassing curriculum content, learning environments, and educator capacity—has experienced profound degradation. The quality of education at all levels has deteriorated to such an extent that graduates are increasingly deemed unemployable in the international labor market. This decline underscores an urgent need for systemic intervention.

A wide gamut of ICT tools holds potential for revitalizing this system. As noted by various scholars (Alyebelehin & Idemudia, 2021; Kavithanjali, 2019; among others), these technologies include computers, televisions, internet devices, artificial intelligence, blockchain, and various projection systems.

Globally, the application of such ICT components has proven highly effective in enriching teaching and research, facilitating distance learning, enabling teleconferencing, and providing virtual library services. The internet, as

a cornerstone of this digital infrastructure, serves as a crucial platform for organizing lectures, disseminating knowledge, and accessing current information.

That said, Nigeria's status as a developing nation is characterized by low adoption rates of technological tools within its educational sector. This deficiency was starkly exposed during the COVID-19 pandemic in 2020.

While schools in technologically advanced nations swiftly transitioned to remote learning via ICT protocols, educational processes in Nigeria and many other African countries ground to a halt, creating widespread frustration among learners, teachers, and parents and stalling national development.

This technological lag casts serious doubt on the feasibility of achieving the United Nations' Sustainable Development Goals—particularly SDG 4—in Nigeria. Earlier observations by scholars like Okiy (cited in Aju, Tyopev & Toti, 2020) lament the inadequate state of Nigerian schools, noting that institutions at all levels are ill-equipped to produce graduates suited for the 21st century. Chronic underfunding has resulted in a dire shortage of infrastructure, low computer usage, and pedagogical deficiencies, all of which inhibit the effective integration of ICTs.

To reverse this trend, the Nigerian government must prioritize education through strategic, workable interventions that assure the full utilization of emerging technologies. Key considerations should include a comprehensive redesign of curriculum content, coupled with intensive and continuous training and retraining for teachers at all levels, with a strong emphasis on digital literacy and ICT integration. Only through such committed, systemic change can Nigeria hope to redress its learning crisis and harness the transformative potential of information and communication technologies.

MOTIVATION FACTORS FOR THE USE OF ICTS AND THE IMPACT ON LEARNING PROCESS

Information and communication technologies (ICTs) exert an unprecedented positive impact on learners, particularly when appropriate tools are integrated effectively and learners are psychologically prepared to engage with them.

Scholars such as Agboola and Shaibu (2019) have extensively documented the transformative influence of ICTs on educational environments, teachers, and learners. Their contributions, among others, highlight several key benefits:

The integration of ICTs supports performance-based curricula, revitalizes learner engagement, and enhances the quality of knowledge acquisition—especially in challenging subject areas. Furthermore, ICTs promote and sustain independent learning across diverse fields and dramatically improve access to educational materials. Through digital tools, learners can

readily access e-books, academic journals, past examination papers, and even establish mentorship connections with experts across the globe.

This represents a radical departure from traditional teaching and learning methods, which often relied on abstraction, speculation, and decontextualized interactions rather than evidence-based or data-driven instruction.

ICTs have aggressively bridged this gap, supplying concrete information and facilitating more authentic learning experiences. For example, as noted by Loxley (cited in Kwaku & Nana, 2019), the use of ICTs has not only shifted teachers' perceptions positively but also elevated their digital competence—a change that simultaneously motivates both educators and learners and leads to qualitatively richer learning outcomes.

The motivation behind adopting these technologies is deeply rooted in addressing historical inefficiencies in education. Numerous scholars (Otunu-Ogbisi, 2007; Ioryem, Sambe, & Agyo, 2018; Aju, Tyopev, & Tofi, 2020; among others) emphasize that before the emergence of ICTs, teaching and learning were often arduous and time-consuming for both instructors and learners.

The introduction of technologies such as projectors, scanners, and cameras has significantly reduced these difficulties—conserving time, reducing stress, and simplifying complex processes. In this regard, time savings are frequently cited as a major motivating factor for adopting emerging technologies in educational settings.

LEARNING AND THE LEARNING CRISIS IN SCHOOLS IN NIGERIA

Learning is the process through which knowledge, skills, attitudes, values, and behaviors are acquired via experience and instruction. It entails a complex interplay of cognitive, emotional, and social factors, shaped by both individual and environmental influences (Jones et al., 2016).

Central to this process is change—whether in understanding, behavior, or perspective—that result from experience and enhances future performance and learning potential (Usman & Madudili, 2019). As learners engage with new ideas and experiences, they often come to view concepts, and the world at large, differently.

In formal educational contexts, learning refers to the structured acquisition of knowledge, skills, and values within institutions such as schools, colleges, and universities (UNESCO, 2017). This process involves cognitive, emotional, and social engagement, enabling learners to comprehend diverse subjects, cultivate critical thinking, and apply their learning in real-world settings (Haleem et al., 2022). It is essential to recognize that learning is not a passive reception

of information but an active process undertaken by learners themselves—shaped by how they interpret and respond to experiences.

Moreover, learning in schools extends beyond the absorption of disciplinary content. While factual knowledge is important, meaningful education must also provide ample opportunities for learners to develop and practice intellectual skills—such as problem-solving and scientific inquiry—as well as motor skills, social competencies, and values through interaction and collaboration with others.

LEARNING POVERTY CRISIS

Learning poverty is a condition in which children, despite having attended school for several years, fail to acquire foundational literacy and numeracy skills. This concept, introduced by the World Bank in 2019, underscores the critical issue of educational quality and its direct impact on human capital development (World Bank, 2022).

Specifically, the World Bank (2021) defines learning poverty as the inability of children aged 10 or older to read and comprehend a simple age-appropriate text. Prevalent particularly in low- and middle-income countries, learning poverty reflects systemic failures in education to equip children with essential skills needed for personal success and societal contribution.

The consequences of learning poverty are profound and multi-dimensional, affecting individuals, communities, and nations. For individuals, the lack of basic skills early in education impedes academic progress, limiting opportunities for advanced schooling and vocational training and perpetuating cycles of disadvantage (OECD, 2012; UNESCO et al., 2021).

At the community and societal levels, high rates of learning poverty correlate with reduced human capital and lower productivity, stifling economic growth and undermining competitiveness in the global economy (Azevedo, 2020).

Furthermore, inadequate investment in education exacerbates social inequality and can fuel instability, as seen in regions like northeastern Nigeria, where historical educational neglect has intersected with youth unrest and extremism.

In Nigeria, the scale of the challenge is particularly alarming. Recent data from UNESCO and the World Bank (2021) indicate that approximately 40% of children aged 6–11 perform below the minimum proficiency level in reading. This has dire implications for the country's future workforce and economic development.

Contributing factors include chronic underfunding of education, deficient infrastructure, a shortage of qualified teachers,

and a lack of instructional materials. Moreover, household poverty further compounds these challenges, negatively affecting learners' academic performance and overall educational experience.

CAUSES OF LEARNING POVERTY CRISIS IN SCHOOLS

The learning poverty crisis in Nigeria is driven by a complex and interconnected set of factors, including inadequate school infrastructure, a shortage of qualified teachers, insufficient learning materials, an outdated curriculum, and profound socioeconomic disparities. These elements often reinforce one another, creating a vicious cycle that perpetuates low-quality education and sustained learning deficits.

A critical barrier to quality education is the widespread inadequacy of school infrastructure, particularly in low-income rural areas. This includes a lack of proper classrooms, libraries, sanitation facilities, and safe learning environments (UNESCO, 2020).

Such deficiencies disrupt effective learning by forcing learners to study in overcrowded or dilapidated spaces without access to essential resources, thereby compromising their health, safety, and academic progress. Addressing these infrastructural gaps is fundamental to establishing conducive learning environments that can support improved educational outcomes.

Compounding this issue is a severe shortage of well-trained and qualified teachers. Inadequate teacher preparation programs and low teacher-to-learner ratios diminish the quality of instruction and limit personalized support for learners (Jones & Brown, 2020). Without ongoing professional development, educators often struggle to deliver the curriculum effectively or engage learners meaningfully (Williams, 2021).

Large class sizes further exacerbate the problem, making it difficult for teachers to provide individualized attention or accommodate diverse learning needs (Garcia & Rodriguez, 2017). The result is limited interaction and feedback, which impedes learners' mastery of subject matter.

Furthermore, insufficient access to learning materials—such as textbooks, digital resources, and other educational tools—restricts learners' ability to engage in independent learning and stay updated with relevant information (Smith, 2018; Jones et al., 2020). This shortage curtails opportunities for self-directed study and exploration, hindering the development of essential knowledge and skills (Brown, 2019).

Beyond these resource and staffing challenges, the Nigerian curriculum itself presents a significant obstacle. The current system is often criticized for prioritizing certification over skill acquisition, thereby producing graduates who may be educated but lack practical competencies.

There is a pressing need for a curriculum that integrates technologically driven and entrepreneurial skills, equipping learners to address social problems and contribute meaningfully to the economy (Voice of Youths, 2016). As noted by The Nation (2015), regular curricular reviews to incorporate computer skills and entrepreneurship could elevate the relevance and quality of education in Nigeria.

Together, these factors form a daunting but addressable barrier to educational equity. System-level reforms targeting infrastructure, teacher quality, resource allocation, and curricular modernization are essential to breaking the cycle of learning poverty and fostering a more inclusive and effective education system.

APPROACHES TO REDRESS LEARNING POVERTY CRISIS

Addressing the learning poverty crisis requires a comprehensive and multi-faceted strategy that targets its root causes through coordinated policy and practice. Effective interventions must ensure equitable access to quality education, invest in teacher training and professional support, provide adequate learning resources and infrastructure—including the integration of information and communication technologies (ICTs)—and promote inclusive educational policies tailored to diverse learner needs. Early childhood interventions, such as literacy programs and parental engagement initiatives, are particularly critical for mitigating learning deficits and establishing a strong foundation for educational success

To improve learning outcomes, policymakers and educational stakeholders must prioritize targeted investments in the education system. Key measures include enhancing teacher training and instructional support, expanding access to quality learning materials, integrating ICTs and evidence-based pedagogical methods, establishing robust assessment systems to monitor both learner and teacher progress, and equipping schools with modern library resources.

Furthermore, efforts to combat learning poverty must engage with broader socio-economic factors. This entails addressing underlying issues such as poverty, inequality, and gender disparities, which exacerbate educational disadvantage and impede learning.

Strengthened collaboration among government agencies, civil society organizations, and international institutions is essential to mobilize resources, share expertise, and align efforts for sustainable impact. Through coordinated and context-sensitive action, Nigeria can effectively reduce learning poverty and foster inclusive educational development.

DISADVANTAGES OF INTENSIVE USE OF ICTS IN SCHOOLS IN NIGERIA

The adage "readers are leaders" underscores the importance of literacy, yet Nigeria continues to struggle with a deeply entrenched poor reading culture. The emergence of Information and Communication Technologies (ICTs) has further complicated this landscape, often diverting learners' attention away from sustained, critical reading.

Many of the learners gravitate toward consuming motivational content promising quick success, rather than engaging with well-researched scholarly or literary works. Although ICTs hold significant potential for enhancing education, their misuse poses substantial risks to learning quality and intellectual development.

A primary concern is the unreliable nature of much online information, which often consists of unverified personal opinions, unedited texts, and factual inaccuracies. Learners who uncritically rely on such sources risk internalizing misinformation and adopting incorrect grammatical structures, ultimately compromising the integrity of their learning.

Furthermore, the availability of digital resources can inadvertently promote academic complacency; when learners know they can access materials online, they may neglect physical attendance and active participation in classes—a tendency that undermines their educational development.

While reading remains fundamental to learning, unrestricted exposure to diverse—and often low-quality—online writing genres introduces new dangers. Digital media frequently promotes superficial reading strategies, such as skimming and scanning, at the expense of deeper analytical engagement. This shift impedes the development of critical reading skills necessary for thorough comprehension and nuanced understanding.

To address these challenges and preserve essential literacy skills in an era of learning poverty, deliberate measures must be taken to integrate structured reading and writing instruction into educational practice. The following actions are recommended:

1. Educators should receive professional development in strategies that promote deep reading, critical writing, and problem-solving skills, equipping learners to address complex societal issues.
2. Schools should implement counseling and digital literacy programs to guide learners in the responsible use of ICTs, including how to identify credible sources and avoid inappropriate or unreliable content.
3. Parents must actively monitor their children's online activities at home to ensure they are engaged in meaningful and educational content.

4. Educational institutions should be supplied with adequate instructional materials, including ICT infrastructure, to support effective teaching and learning. When integrated thoughtfully, the benefits of technology can far outweigh its drawbacks.
5. Through coordinated efforts among teachers, parents, and government stakeholders, Nigeria can cultivate a renewed culture of reading that harnesses the potential of technology while safeguarding academic rigor and intellectual growth.

CONCLUSION, RECOMMENDATIONS AND IMPLEMENTATION STRATEGIES

The integration of Information and Communication Technologies (ICTs) holds significant potential to transform Nigeria's education system and address the pervasive learning poverty crisis. This paper has highlighted both the advantages and challenges of ICT adoption, recognizing its capacity to improve knowledge access, enrich learning experiences, and increase learner engagement. However, without proper management and pedagogical integration, technology can become a disruptive and counterproductive force, potentially contributing to declines in foundational skills such as reading and writing.

The learning poverty crisis in Nigeria is a multifaceted issue, rooted in inadequate infrastructure, a shortage of qualified teachers, insufficient learning materials, and outdated teaching methodologies. To effectively address these challenges, the following comprehensive strategies are recommended:

Substantial investment in educational infrastructure is essential to create conducive learning environments. This includes constructing and renovating classrooms, libraries, and sanitation facilities, as well as ensuring reliable electricity and internet connectivity. The Federal and State Ministries of Education should establish clear policy guidelines on infrastructure standards and pursue partnerships with international organizations such as UNDP, UNICEF, and the World Bank to mobilize resources and expertise.

Teacher competence is central to educational quality. Continuous professional development programs should be implemented to enhance pedagogical skills and digital literacy, enabling teachers to effectively integrate ICTs into their instruction. Education supervisors must ensure teachers receive ongoing training and support to remain current in both their subject areas and instructional technologies.

The national curriculum should be redesigned to meet the demands of the 21st century, emphasizing digital literacy, critical thinking, problem-solving, and creativity. It should promote learner-centered, inquiry-based learning

to foster deeper engagement and understanding. A committee of education experts with knowledge of global trends and ICT integration should lead this reform to ensure relevance and effectiveness.

Ensuring all learners, regardless of socioeconomic background, have access to computers, internet connectivity, and educational software is critical. This can be achieved through public-private partnerships, government initiatives, and international cooperation to bridge the digital divide.

Robust systems for monitoring and evaluating ICT initiatives are necessary to assess their impact on learning outcomes. Data-driven insights will enable evidence-based adjustments to policies and practices, ensuring that investments in educational technology yield meaningful returns.

In conclusion, the strategic integration of ICTs—supported by infrastructure, teacher readiness, curricular relevance, equitable access, and continuous evaluation—can significantly reduce learning poverty and enhance educational outcomes across Nigeria. Through committed and coordinated effort, Nigeria can build an inclusive, forward-looking education system capable of preparing all learners for future challenges and opportunities.

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