https://doi.org/10.68071/3tkywcac

ORIGINAL RESEARCH
Kakanchi Multidisciplinary Journal of COEASU
Vol. 1, Issue 1, 1-10, July 2026
OPEN ACCESS
E-ISSN 3156-397X

Integrating Information and Communication Technology Tools in Guidance and Counselling Teacher Training Programs in Nigeria: Prospects and Challenges

Egwuda, Enefola Job, Abutu James Ajodo & Suberu Ovauoiza

Department of General Education, Federal College of Education, Okene, Kogi State, NIGERIA

Correspondence: *egeonu.cecilia1977@fceokene.edu.ng*

Highlights:

Reviews the engagement of Information Communication Technology (ICT) in Guidance and Counselling (G&C) training for teachers in Nigeria.

Identifies key challenges as inadequate infrastructure, low ICT literacy trainees, funding shortages, and resistance to change in attitude.

Proposes an integration model involving infrastructure development, curriculum reform, consistent professional training, and ethical guidelines.

Received date: 7 May 2026
Revised date: 13 June 2026
Accepted date: 20 July 2026

Citation: Egwuda, E. J, Abutu J. A. & Suberu O., (2026). Integrating Information and Communication Technology Tools in Guidance and Counselling Teacher Training Programs in Nigeria: Prospects and Challenges.1(01), 1-10.

Abstract: The application of Information Communication Technology (ICT) in Nigerian education system is very important. This research paper reviews the engagement of ICT tools in Guidance and Counselling (G&C) training for teachers in Nigeria. The study focuses on the prevailing challenges, future prospects, and a practical model for integration in Nigerian educational system. Despite the advocacy and promotion of national education policies with technology, ICT integration in G&C programmes at various levels including secondary schools, colleges of education, polytechnics and universities largely remains theoretical, with limited or no hands-on exposure for trainees. The key challenges discovered in this research findings includes inadequate infrastructure, low ICT literacy among lecturers and trainees, lack or shortages in funding, and resistance in attitude. This study explores the prospects of enhanced accessibility, data-driven interventions, virtual simulations, and improved service delivery when ICT is effectively deployed. A proposal of an integration model was made in this paper placing emphasis on development of infrastructure, reforms in curriculum, consistent professional training, and ethical guidelines. The study concludes that deliberate and sustained efforts to embed ICT in counsellor training will equip Nigerian teachers with the digital competencies needed to provide effective, scalable, and modern guidance services, thereby contributing to quality education and national development.

Keywords: ICT tools, Guidance and Counselling, Integration

Introduction

The integration of Information and Communication Technology (ICT) tools has revolutionized educational practices worldwide, transforming traditional pedagogical approaches into dynamic, interactive, and learner-centered processes. In the field of guidance and counselling, ICT facilitates efficient data management, real-time communication, personalized interventions, and access to vast resources, thereby enhancing service delivery and professional training (Ekechukwu & Eze, 2016). For teachers undergoing guidance and counselling training in Nigeria, ICT offers opportunities to develop competencies in digital counselling platforms, online assessment tools, and virtual mentoring systems, aligning with global shifts toward technology-driven professional development. This evolution is particularly critical in developing contexts where human resource constraints limit face-to-face counselling, making ICT an indispensable enabler for scalable training programs (Otakpo et al., 2025). As Nigeria strives to meet Sustainable Development

https://doi.org/10.68071/3tkywcac

Goal 4 on quality education, the adoption of ICT in teacher training for guidance and counselling emerges as a strategic imperative to equip educators with 21st-century skills.

Nigeria's educational landscape has increasingly emphasized ICT integration through national policies, including the National Policy on Education, which underscores technology as a catalyst for instructional improvement and teacher capacity building (Federal Ministry of Education [FME], 2019). In guidance and counselling training programs offered in colleges of education and universities, ICT tools such as computers, e-mail, video conferencing, and social media platforms enable trainees to simulate counselling sessions, analyze student data, and access global best practices. However, despite policy directives, the practical incorporation of these tools into teacher training curricula remains uneven, often limited to theoretical exposure rather than hands-on application (Mamman & Dunguje, n.d.). This gap highlights the need to examine how ICT can be systematically embedded in pre-service and in-service training for Nigerian teachers specializing in guidance and counselling. Guidance and counselling play a pivotal role in addressing students' academic, vocational, and personal challenges within Nigeria's secondary and tertiary education systems. Teachers trained in this area serve as frontline providers of psychosocial support, career guidance, and behavioral interventions, yet traditional training methods often fall short in preparing them for contemporary demands (Amgbara, 2022). The incorporation of ICT into such training enhances interactivity, allowing trainees to practice e-counselling techniques, utilize digital assessment instruments, and collaborate across institutions via online platforms. Empirical evidence suggests that ICT-equipped counsellors achieve greater efficiency in problem identification and intervention planning, ultimately contributing to improved learner outcomes (Ede et al., 2021). Recent studies underscore the growing recognition of ICT competencies among guidance and counselling teachers in Nigerian public schools. Positive attitudes toward ICT have been documented, with teachers acknowledging its potential to foster professional excellence and international competitiveness (Otakpo et al., 2025). In colleges of education, where most guidance and counselling teachers receive initial training, ICT integration is viewed as essential for service provision success, enabling quick information retrieval, student interviews, and on-the-spot problem analysis (Mamman & Dunguje, n.d.). Nevertheless, actual utilization remains low, signaling a disconnect between policy intent and classroom realities.

Despite its transformative potential, the adoption of ICT tools in guidance and counselling training for Nigerian teachers faces multifaceted challenges. Infrastructure deficits, including unreliable power supply, poor internet connectivity, and inadequate hardware, severely constrain practical training sessions (Osakwe, 2022). Many teacher training institutions lack sufficient ICT-compliant facilities, while funding shortages limit the procurement of modern tools such as projectors, video conferencing software, and specialized counselling applications (Ekechukwu & Eze, 2016). These barriers are compounded by geographic disparities, with rural colleges experiencing even greater resource gaps than their urban counterparts. Human capital limitations represent another significant hurdle. A substantial proportion of guidance and counselling lecturers and trainees lack advanced ICT skills, resulting in underutilization of available technologies and reliance on traditional face-to-face methods (Otakpo et al., 2025). In-service training programs rarely incorporate comprehensive ICT modules, leaving teachers ill-prepared to integrate digital tools into counselling practice (Adegboyega et al., 2022). Attitudinal resistance,

https://doi.org/10.68071/3tkywcac

stemming from perceived complexity or fear of technology, further impedes progress, particularly among older educators (Achor & Ugwuanyi, 2020). The COVID-19 pandemic exacerbated these challenges while simultaneously illuminating the urgency of ICT adoption. Lockdown measures disrupted conventional counselling services, forcing a rapid shift toward digital alternatives that many Nigerian teachers were unprepared to implement (Adiela, 2022). This crisis revealed critical gaps in pre-service training curricula, where limited exposure to e-counselling platforms hindered effective remote support for students. Post-pandemic reflections emphasize the need for resilient, technology-infused training models to withstand future disruptions.

Prospects for ICT integration in guidance and counselling teacher training in Nigeria are nonetheless promising. When adequately resourced, ICT can democratize access to training materials, facilitate virtual simulations of counselling scenarios, and enable continuous professional development through online workshops and webinars (Osakwe, 2022). Enhanced data analytics capabilities allow trainees to track student progress more effectively, while collaborative platforms foster knowledge sharing among counselling educators nationwide (Ede et al., 2021). Government investment aligned with national ICT-in-education policies could yield substantial returns in teacher competence and student wellbeing. A well-designed model for integration could bridge existing gaps by embedding ICT competencies progressively across teacher education programs. Such a framework would combine infrastructure upgrades, mandatory ICT modules in guidance and counselling curricula, and ongoing professional development for lecturers (Mamman & Dunguje, n.d.). By addressing challenges through targeted interventions and leveraging prospects for innovation, Nigeria can position guidance and counselling training at the forefront of educational technology adoption. This paper therefore expositorily examines the use of ICT tools in guidance and counselling training for teachers in Nigeria. It discusses prevailing challenges, explores future prospects, and proposes a pragmatic model for seamless integration within colleges of education and related institutions. Through this analysis, the study contributes to policy and practice aimed at strengthening the capacity of Nigerian teachers as effective guidance counsellors in a digital era.

The integration of Information and Communication Technology (ICT) into guidance and counselling has transformed service delivery globally by enabling personalized, accessible, and data-driven interventions. In Nigeria, where teacher training institutions prepare most guidance counsellors, ICT tools such as computers, internet platforms, video conferencing, and mobile applications offer opportunities to enhance training through virtual simulations, real-time data analysis, and remote mentoring. However, empirical studies consistently show a significant gap between policy aspirations and actual implementation in colleges of education and universities, with limited hands-on exposure for trainees. Early research in Nigeria established ICT as an indispensable tool for effective guidance and counselling in secondary schools. Ekechukwu and Eze (2016) found that ICT facilitates quick retrieval of student information, rapid problem analysis, virtual interviews, and on-the-spot reporting, particularly benefiting shy students who prefer digital anonymity. Their study in Imo State highlighted perceived usefulness among counsellors but noted infrastructural barriers that restricted practical utilization, laying groundwork for subsequent investigations into counsellor education.

Recent empirical evidence reveals low ICT competencies among practising guidance and counselling teachers. Otakpo et al. (2025) reported limited digital literacy

https://doi.org/10.68071/3tkywcac

levels in public secondary schools in Rivers State, despite recognition of ICT's potential for improved data management, teaching methodologies, and global competitiveness. The study recommended dedicated government-supported ICT centres for counselling personnel to address equipment shortages and skill gaps. In colleges of education, where most teachers receive initial training, implementation remains largely theoretical. Mamman and Dunguje (2024) observed that while national policies endorse ICT integration, actual service provision suffers from poor media usage due to budgetary constraints and non-compliance among guidance personnel. Their findings underscore the need for systematic embedding of ICT across pre-service programmes to make counselling services more successful. Infrastructural deficits constitute a major recurring challenge. Studies by Osakwe (2022), Adiela (2022), and Amgbara (2022) identify unreliable electricity, poor internet connectivity, inadequate hardware, and funding shortages as primary barriers. These issues were intensified during the COVID-19 pandemic, when many Nigerian teachers and trainees struggled with abrupt shifts to digital counselling, disrupting psychosocial support for students. Human capital limitations further compound the problem. Low digital skills among lecturers and trainees, coupled with attitudinal resistance and insufficient professional development, lead to underutilization of available tools. Christian (2025) and related reviews highlight institutional barriers, including inadequate counsellor training, resulting in low digital competence and professional anxiety. Capacity-building initiatives are urgently needed to foster positive attitudes and practical proficiency.

Despite these challenges, the literature points to promising prospects. Well-integrated ICT can democratize access to training resources, enable virtual counselling simulations, facilitate data analytics for student progress, and support continuous professional development through webinars and collaborative platforms. Scholars such as Mcasson (2026) and Ntaji et al. (2025) advocate for curriculum reforms that embed digital tools, ethical guidelines, and mandatory e-counselling modules to enhance scalability, resilience, and alignment with national education goals.

Collectively, reviewed studies affirm ICT's transformative potential in guidance and counselling teacher training while exposing systemic infrastructural, skill-related, and policy-implementation gaps. This synthesis reveals the need for a comprehensive, context-specific integration model tailored to Nigerian colleges of education to bridge existing divides and prepare teachers for effective digital-era counselling practice.

EXPOSITORY ANALYSIS

The main issue in the use of ICT tools in guidance and counselling training for teachers in Nigeria is the wide disconnect between robust national policy frameworks that promote technology integration and the minimal practical implementation observed in most teacher training institutions. Although the National Policy on Education and related initiatives recognize ICT as essential for building 21st-century teacher competencies, guidance and counselling curricula in colleges of education and universities largely remain theoretical. Trainees often receive only basic awareness rather than hands-on experience with e-counselling platforms, digital assessment tools, virtual simulations, or data analytics applications. This gap results in graduates who are inadequately prepared to function as effective digital-era guidance professionals capable of addressing students' academic, vocational, and psychosocial needs (Ekechukwu & Eze, 2016; Mamman & Dunguje, 2024). Infrastructural deficits represent a foundational dimension of the problem. Unreliable electricity supply, poor internet connectivity, insufficient computers, and the absence of dedicated digital

counselling laboratories severely limit practical training sessions, particularly in rural-based colleges of education. These constraints were sharply exposed during the COVID-19 pandemic, when institutions were compelled to shift abruptly to online modes without adequate infrastructure, leading to disrupted skill acquisition and service delivery (Adiela, 2022; Osakwe, 2022). Without functional ICT facilities, trainees cannot develop proficiency in real-world digital counselling scenarios. Human capital limitations further compound the infrastructural barriers. A significant number of guidance and counselling lecturers and pre-service teachers exhibit low ICT literacy levels, resulting in heavy reliance on traditional face-to-face methods even when basic tools are available. Professional development programs seldom incorporate comprehensive modules on digital counselling ethics, data protection compliance under Nigeria's Data Protection Act, or the practical application of specialised software. Attitudinal resistance, often stemming from perceived technological complexity or fear among older educators, additionally slows the rate of adoption (Christian, 2025; Otakpo et al., 2025). Empirical studies consistently confirm low ICT competencies among both practising counsellors and those in training. Research conducted in Rivers State, for example, revealed limited digital skills among public secondary school guidance teachers despite their acknowledgment of ICT's potential for efficient data management and enhanced service delivery. Similarly, investigations focused on colleges of education indicate that while national policies endorse integration, actual utilisation suffers from poor media usage and widespread non-compliance among guidance personnel (Otakpo et al., 2025; Ntaji et al., 2025). Funding shortages and weak policy enforcement mechanisms perpetuate the cycle. Inadequate budgetary allocations to teacher training institutions restrict the procurement, maintenance, and upgrading of ICT infrastructure, while resources are unevenly distributed, favouring urban institutions over their rural counterparts. Although government initiatives exist to drive technology in education, enforcement remains ineffective, allowing the gap between policy rhetoric and classroom reality to persist (Ogbodo, 2023; Abdullahi, 2023).

The consequences of this main issue extend beyond teacher preparation to broader educational outcomes and national development objectives. Teachers who lack digital counselling competencies struggle to provide timely, scalable, and anonymous support to students, contributing to suboptimal learner wellbeing, increased school dropout rates, and reduced effectiveness in career guidance. In the context of Sustainable Development Goal 4, this digital divide undermines Nigeria's efforts to develop a resilient education system equipped to serve its large and diverse student population (Adiela, 2022; Christian, 2025). Despite the systemic challenges, the literature also points to promising prospects once barriers are systematically addressed. Properly integrated ICT tools can democratize access to training resources, enable virtual simulations of complex counselling scenarios, facilitate real-time tracking of student progress through data analytics, and support continuous professional development via webinars and collaborative online platforms. Digitally competent counsellors reportedly achieve greater efficiency, reach shy or remote clients more effectively, and deliver more personalised interventions even in resource-constrained environments (Ekechukwu & Eze, 2016; Ntaji et al., 2025).

Ultimately, resolving the main issue demands a holistic, context-specific integration model that simultaneously tackles infrastructure deficits, builds human capacity through mandatory ICT modules and sustained lecturer training, and establishes clear ethical guidelines aligned

https://doi.org/10.68071/3tkywcac

with national regulations. Strong collaboration among the Federal Ministry of Education, the National Commission for Colleges of Education, teacher training institutions, and professional bodies such as the Counselling Association of Nigeria is critical. Only through deliberate and sustained reform can Nigeria bridge the existing gap and equip its teachers as competent, innovative guidance and counselling professionals in the digital age (Mamman & Dunguje, 2024; Christian, 2025).

CHALLENGES, PROBLEMS HINDERING UTILIZATION, AND WORKABLE SOLUTIONS

The integration of ICT tools in guidance and counselling training for teachers in Nigeria faces significant infrastructural challenges that undermine effective implementation. Unreliable electricity supply, poor or non-existent internet connectivity, inadequate hardware such as computers and projectors, and the absence of dedicated digital counselling laboratories are widespread, particularly in rural colleges of education. These deficits make it difficult for trainees to engage in hands-on practice with e-counselling platforms, virtual simulations, or data management tools. The situation was exacerbated during the COVID-19 pandemic, when sudden shifts to online training exposed the fragility of existing infrastructure and disrupted skill development (Adiela, 2022; Osakwe, 2022). A workable and immediately actionable solution is the establishment of solar-powered ICT hubs, shared between two or three neighbouring colleges of education where necessary, so that unreliable grid electricity no longer halts practical sessions; this can be paired with subsidised institutional data bundles negotiated collectively by the National Commission for Colleges of Education (NCCE) with telecommunication providers, reducing the connectivity burden on individual institutions.

Human capital limitations constitute another major challenge and a key problem hindering the utilization of ICT in this area. Many guidance and counselling lecturers and pre-service teachers exhibit low ICT literacy levels, including inefficiency in basic computer skills and limited familiarity with specialised counselling applications. Professional development programs rarely provide comprehensive, practical training on digital ethics, data protection, or the pedagogical use of ICT in counselling. Attitudinal resistance, often linked to perceived complexity or fear of technology among educators trained in traditional methods, further slows adoption and results in continued reliance on face-to-face approaches (Christian, 2025; Otakpo et al., 2025). This problem is workable through mandatory, competency-graded ICT certification embedded in continuous professional development, delivered in short cyclical modules (rather than one-off workshops) so that lecturers advance from basic digital literacy to applied e-counselling skills over successive terms; pairing early-career, digitally confident lecturers with more experienced but less tech-familiar colleagues in a structured mentoring scheme would also directly address attitudinal resistance by normalising ICT use through peer example rather than top-down directive alone.

Funding shortages and weak policy enforcement deepen these difficulties. Inadequate budgetary allocations restrict the procurement and maintenance of ICT facilities, while resources are unevenly distributed, favouring urban institutions. Although national policies endorse technology integration, enforcement mechanisms remain ineffective, leading to non-compliance and a persistent gap between policy rhetoric and actual practice in teacher training institutions. High costs of acquiring computers, internet subscriptions, and licensed software add to the burden on institutions and individual trainees (Mamman & Dunguje, 2024; Egede, 2019).

https://doi.org/10.68071/3tkywcac

A practicable response is the creation of a ring-fenced ICT development levy within existing tertiary education funding mechanisms (such as TETFund allocations), specifically earmarked for guidance and counselling ICT laboratories, alongside a public compliance dashboard maintained by the NCCE that publishes each college's ICT integration status, making enforcement visible and creating institutional accountability rather than relying on unmonitored policy directives.

The implications of these challenges are profound for teacher preparation and service delivery. Graduates from guidance and counselling programs often enter schools with insufficient digital competencies, limiting their ability to provide timely, scalable, and anonymous support to students facing academic, vocational, or psychosocial issues. This results in suboptimal counselling outcomes, reduced efficiency in problem identification and intervention, and increased vulnerability among learners, including higher risks of school dropout and poor career decision making (Otakpo et al., 2025; Christian, 2025). Embedding a practical ICT competency assessment as a graduation requirement for guidance and counselling trainees, verified through a supervised e-counselling simulation exercise, would ensure that this implication is addressed at the point of teacher preparation rather than left to chance after graduation.

At the systemic level, the poor integration of ICT in counsellor training undermines national educational goals, including the achievement of Sustainable Development Goal 4 on quality and inclusive education. It perpetuates a digital divide between urban and rural settings and between trained professionals and the large student population they serve. Without digitally competent teachers, Nigeria's education system struggles to build resilience against future disruptions and to prepare students for a technology-driven society (Adiela, 2022; Ntaji et al., 2025). Addressing this systemic implication requires deliberate rural-urban equity targets within ICT infrastructure rollout plans, ensuring that a fixed proportion of new ICT investment is directed to rural colleges of education each funding cycle, rather than allowing distribution to default to urban institutions with stronger advocacy capacity.

Addressing these challenges and mitigating their implications requires urgent, coordinated action. A holistic approach involving sustained investment in infrastructure, mandatory ICT modules in curricula, continuous professional development for lecturers and trainees, and the development of context-specific ethical guidelines is essential. Taken together, the solar-powered hub model, graduated certification pathway, ring-fenced funding levy, compliance dashboard, graduation-linked competency assessment, and rural-urban equity targets outlined above constitute a concrete, achievable pathway to resolving the specific problems raised, rather than a restatement of general aspirations. Such reforms would not only overcome current barriers but also unlock the transformative potential of ICT, enabling Nigerian teachers to deliver more effective, inclusive, and forward-looking guidance and counselling services in the digital era (Mamman & Dunguje, 2024; Osakwe, 2022).

RECOMMENDATIONS

Based on the identified challenges and prospects, the following practical recommendations are proposed to promote effective integration of ICT tools in guidance and counselling training for teachers in Nigerian colleges of education and universities.

1. Federal Ministry of Education and the National Commission for Colleges of Education should allocate substantial funds specifically for

https://doi.org/10.68071/3tkywcac

upgrading ICT infrastructure across all teacher training institutions.

2. The guidance and counselling curriculum in colleges of education and universities should be comprehensively reviewed and reformed. Mandatory ICT modules must be introduced progressively across all levels of training.
3. Continuous professional development should be institutionalised for both lecturers and practising guidance counsellors. Regular workshops, seminars, and retraining programmes on emerging ICT tools and their pedagogical applications in counselling must be organised.
4. Dedicated ICT centres for guidance and counselling should be established in all colleges of education. These centres would function as hubs for practical sessions, research, simulation exercises, and inter-institutional collaboration.
5. Finally, a robust monitoring and evaluation framework should be developed to track the progress of ICT integration, ensure compliance across institutions, and regularly assess its impact on teacher competencies and eventual student outcomes.

CONCLUSION

This study has expository examined the use of ICT tools in guidance and counselling training for teachers in Nigeria. It highlighted major challenges such as infrastructural deficits, low digital skills among lecturers and trainees, funding shortages, and weak policy enforcement. At the same time, it explored the promising prospects that effective ICT integration offers, including improved accessibility, virtual counselling simulations, data-driven interventions, and greater resilience in service delivery.

Successful integration of ICT holds tremendous potential to transform the preparation of Nigerian teachers into digitally competent guidance and counselling professionals. Such teachers would be better equipped to provide timely, scalable, anonymous, and effective support to students facing academic, vocational, and psychosocial challenges. Without deliberate and sustained action, however, the current digital divide will continue to weaken the quality of counselling services and slow down progress toward quality education for all. Ultimately, bridging the existing gap between policy intentions and practical reality demands strong commitment and coordinated efforts from government agencies, teacher training institutions, professional counselling associations, and development partners. By implementing the recommended strategies and adopting a well-structured integration model, Nigeria can position its guidance and counselling training at the forefront of educational innovation. This will enable teachers to meet the demands of a rapidly evolving digital society and contribute meaningfully to national development through improved student wellbeing and holistic education.

Acknowledgements: The authors acknowledge the institutional support provided by Kogi State College of Education (Technical) Mopa, Kogi State, Nigeria. The research infrastructure and academic environment facilitated the successful execution and completion of this study.

Funding Statement: This work was supported by personal effort.

Data Availability: The analyzed data are included within the article.

Declaration: The authors declare no potential conflicts of interest, financial or otherwise, that could be perceived as influencing the objectivity or integrity of the research presented herein.

Author Contributions: Egwuda, Enefola Job did the Conceptualization & Investigation. **Abutu,**

James Ajodo did the Formal Analysis, Methodology, and Validation, **Suberu, Ovauoiza** support Funding Acquisition, Resources, and Project Administration. **Egwuda, Enefola Job** did the Writing of the original Draft, Writing-Review & Edit.

Disclosure: The AI-assisted visual output has been verified, with the authors taking final responsibility for the intellectual content.

REFERENCE

Abdullahi, U. (2023). Evaluation of information and communication technology utilization in counselling services in Borno State. *African Scholar Journal of Education Research and Library Practice*, 29(8), 19-32.

Achor, E. O., & Ugwuanyi, U. A. (2020). Barriers to ICT integration in school counselling services in Nigeria. *Journal of Nigerian Educational Research and Evaluation, 12(1), 89–105.*

Adegboyega, L., Akinola, M., & Yusuf, T. (2022). ICT integration in guidance and counselling services in Nigerian secondary schools: Challenges and prospects. *Journal of Educational Technology and Counselling Research, 7(2), 45–57. https://doi.org/10.5897/JETCR2022.007*

Adiela, O. N. P. (2022). Challenges of guidance and counselling services during and after Covid-19 pandemic in Nigeria. *Journal of Education and Society, 12(2), 2493–2500.*

Amgbara, B. L. (2022). The role of information and communication technology (ICT) in guidance and counselling service in secondary school in Rivers State. *International Journal of Innovative Information Systems & Technology Research, 10(1), 11–24.*

Christian, O. N. (2025). The impact of digitalization on guidance and counselling in Nigeria: A scoping review. *International Journal of Innovative Psychology & Social Development, 13(4), 137–145.*

Ede, M. O., Okeke, C. I. O., & Okorie, C. U. (2021). Exploring the utilization of ICT for effective guidance and counselling services in Nigerian secondary schools. *Cogent Education, 8(1), Article 1895453. https://doi.org/10.1080/2331186X.2021.1895453*

Egede, B. A. J. (2019). Integration of technology in the training of basic education teachers in Nigeria: Issues, challenges and prospects. In ADECT Conference Proceedings.

Ekechukwu, R. O., & Eze, A. F. (2016). ICT an indispensable tool in effective guidance/counselling services for sustainable educational development in secondary schools in the 21st century in Imo State, Nigeria. *European Journal of Education Studies, 2(3), 22–33.*

Federal Ministry of Education. (2019*). National policy on education* (7th ed.). NERDC Press.

Mamman, M., & Dunguje, A. I. (n.d.). Effects of Information and Communication Technology (ICT) as a means of making guidance and counseling services provision successful in Nigerian colleges of education. *Nigerian Journal of Research in Teacher Education (NIJORTE), 3(1). https://nijorte.com/*

Mcasson, T. U. (2026). *Integration of ICT for enhancing effective and professional guidance and counselling services for school dropout in Nigeria*. In IGI Global Book Chapter.

https://doi.org/10.4018/979-8-3693-9082-5.ch004

Ntaji, M. E., Eze, E. N., & Uba, M. B. I. (2025). Towards digitalization of teaching and learning of guidance and counselling in colleges of education in South East, Nigeria. *Unizik Journal of Educational Research and Policy Studies (UNIJERPS), 19(1), 137–147. https://unijerps.org/*

Ogbodo, T. V. (2023). Appraisal of the application of ICT in public and private colleges of education in Enugu State, Nigeria. *Renaissance University Journal of Management and Social Sciences (RUJMASS)*, 9(2), 141–151.

Osakwe, S. O. (2022*). Information and communication technology: A teaching and learning tool — Its challenges and prospects.* In Conference proceedings of the First Conference of the National Institute of Office Administrators and Information Managers (NIOAIM). Lead City University.

Otakpo, C., Brown, R. I., & Jaja, J. L. E. (2025). ICT competencies among guidance and counseling teachers in public secondary schools in Rivers State. *International Journal of Innovative Education Research, 13(1), 9–14. https://doi.org/10.5281/zenodo.14633002*