

Women Educators' Awareness and Utilization of Audio-Visual Tools in Teaching Social Studies: A Case Study of FUE, Zaria

Philomena Member Solomon ¹; and Arome Tairu Adamu ²

¹Department of General Studies Education, Federal University of Education, Zaria. ²Kaduna State Ministry of Education.

DOI: <https://doi.org/10.62154/qjhcer.2025.018.010723>

Abstract

This study focused on women educators' awareness and utilization of audio-visual tools in teaching social studies: a case study of fue, zaria. The study employed a survey research design. The study's target population consisted of twenty-three (23) female social studies lecturers at FUE, Zaria. Purposive random sampling was utilized to make use of the whole population as they were not much. Data collection was carried out through the utilization of a structured questionnaire. This questionnaire was meticulously designed to capture information regarding the respondents' levels of awareness and utilization of audio-visual tools in teaching Social Studies. To ensure the instrument's validity, it underwent a rigorous validation process involving experts in both the research and language fields. Furthermore, a pilot test was conducted and analysed using the Pearson Product Moment Correlation (PPMC), resulting in a correlation coefficient of 0.84, indicating the instrument's reliability for the research purposes. Data collection occurred over a period of two (2) weeks, and subsequently, the collected data were subjected to descriptive statistical analysis. The study found out that women educators at FUE, Zaria, exhibit a moderate to high level of awareness regarding audio-visual tools in teaching social studies and also there is a generally low level of utilization of audio-visual (AV) tools among women educators in teaching social studies at FUE, Zaria. The researcher concluded by recommending that institutions organize regular training workshops and seminars to equip educators with the necessary technical skills to integrate AV tools effectively into their teaching, among others.

Keywords: Audio-Visual Tools, Women Educators, Social Studies, Technology Integration, Nigeria.

Introduction

The integration of audio-visual (AV) tools in education has significantly transformed teaching and learning processes by making lessons more engaging, interactive, and accessible. Audio-visual tools, such as videos, animations, projectors, and digital media, enhance students' comprehension by catering to different learning styles and making abstract concepts more concrete (Mayer, 2021). In social studies education, where critical thinking, cultural awareness, and civic understanding are emphasized, the use of AV tools can be particularly beneficial in helping students relate theoretical knowledge to real-life situations (Adeyanju, 2020). Studies suggest that AV tools improve retention rates and facilitate active learning by stimulating multiple sensory channels (Clark & Feldon, 2019).

Women educators play a crucial role in shaping educational experiences, yet their awareness and utilization of AV resources may be influenced by various factors, including access, training, and institutional support. The level of awareness among educators determines their willingness to integrate modern teaching aids into instructional delivery. According to Okojie et al. (2022), educators with higher exposure to AV resources are more likely to adopt and utilize them effectively. However, a lack of awareness can lead to underutilization, reducing the potential benefits of AV technology in classrooms. Furthermore, institutional support and professional development programs play a significant role in increasing awareness and encouraging the adoption of AV tools (Yusuf & Balogun, 2021).

The utilization of AV tools depends on factors such as availability, ease of use, and perceived effectiveness in improving student outcomes. Research indicates that educators who frequently integrate AV tools into their lessons report increased student engagement and improved academic performance (Eze & Okonkwo, 2020). However, the extent of utilization varies based on infrastructural availability, technical proficiency, and teaching preferences. In many Nigerian tertiary institutions, including the Federal University of Education (FUE), Zaria, challenges such as poor electricity supply, limited access to digital resources, and inadequate training hinder the effective use of AV tools (Nwosu & Olaitan, 2021).

The use of modern teaching aids, including AV tools, has become increasingly important in improving teaching effectiveness. However, despite their potential, many educators, particularly women, may not fully utilize these tools due to limited awareness, lack of technical expertise, or infrastructural challenges. Understanding the level of awareness and utilization of AV resources among women educators in FUE, Zaria, is essential in identifying gaps, promoting professional development, and enhancing overall instructional quality in social studies education. By assessing these factors, this study aims to contribute to the improvement of instructional practices and the overall learning experience of students.

Statement of the Problem

Despite the growing recognition of audio-visual tools in education, there are concerns about women awareness and utilization among educators in tertiary institutions, particularly in Federal University of Education, Zaria. In FUE, Zaria, female lecturers play a vital role in delivering social studies instruction, yet their engagement with AV tools remains unclear. Challenges such as inadequate access to technology, lack of training, and institutional barriers may hinder the effective use of AV tools in classrooms. Additionally, while studies have examined the impact of AV resources on student learning, there is limited research focusing on women educators' awareness and usage of these tools in teaching social studies. Without a clear understanding of the level of awareness and the extent of AV tools utilization among female educators, efforts to improve instructional quality may be ineffective. This study seeks to assess women awareness and utilization of AV tools in FUE, Zaria.

Research Objectives

1. To assess the level of awareness of audio-visual tools among women educators in teaching social studies at FUE, Zaria.
2. To examine the extent to which women educators utilize audio-visual tools in the teaching of social studies at FUE, Zaria.
3. To compare the level of awareness and the extent of utilization of audio-visual (AV) tools among women educators in the teaching of Social Studies

Research Questions

1. What is the level of awareness of audio-visual tools among women educators in teaching social studies at FUE, Zaria?
2. To what extent do women educators utilize audio-visual tools in the teaching of social studies at FUE, Zaria?
3. Is there a significant difference between the level of awareness and the extent of utilization of audio-visual (AV) tools among women educators in the teaching of Social Studies?

Null Hypothesis

H₀: There is no significant difference between the level of awareness and the extent of utilization of audio-visual tools among women educators in the teaching of Social Studies.

Literature Review

Audio-visual tools represent essential educational resources that have transformed traditional teaching approaches, particularly in interdisciplinary subjects like Social Studies. These tools—including videos, interactive presentations, digital maps, and multimedia applications—offer unique advantages for Social Studies education by bringing abstract concepts, historical events, and diverse cultures into the classroom in concrete, engaging ways (Afolabi & Ogunlade, 2022). According to Babalola and Tihamiyu (2021), the visual and auditory dimensions of these tools align particularly well with Social Studies' focus on social phenomena, cultural understanding, and civic engagement, allowing students to virtually experience different environments and historical contexts. Recent studies have highlighted the particular benefits of audio-visual tools in the Nigerian Social Studies context. Olatunji et al. (2020) found that students taught with audio-visual resources demonstrated significant improvements in cultural awareness and historical comprehension compared to those taught through traditional methods alone. Similarly, Igbokwe and Nwachukwu (2022) documented how audio-visual tools can effectively address the challenges of teaching complex social concepts in Nigerian classrooms, where students often struggle to relate to abstract ideas or distant historical events. These studies collectively emphasize that audio-visual tools are not merely supplementary resources but essential components of effective Social Studies instruction in contemporary educational environments.

Gender Dimensions in Educational Technology Adoption

Research on gender dimensions in educational technology adoption has evolved significantly in recent years, particularly in the Nigerian context. While earlier studies often documented pronounced gender disparities in technology access and utilization, more recent research presents a more nuanced picture. Nwagwu and Ibrahim (2023) found that Nigerian female educators increasingly demonstrate high levels of digital literacy and positive attitudes toward educational technology, though institutional barriers to implementation remain significant. This shift reflects broader societal changes regarding gender roles and increased recognition of technology's importance in education.

Despite these positive trends, female educators in Nigerian higher education institutions still face distinct challenges in technology adoption. Amadi and Ohia (2022) documented how sociocultural expectations, disproportionate domestic responsibilities, and sometimes limited access to professional development opportunities create additional barriers for women educators seeking to integrate technology into their teaching. Emmanuel and Chioma (2019) further observed that these challenges are often magnified in disciplines like Social Studies, where departmental cultures and resource allocation may not prioritize technology integration as consistently as in STEM fields. Understanding these gendered dimensions is crucial for developing effective interventions to support women educators in utilizing audio-visual tools for Social Studies instruction.

Institutional Support and Professional Development

The gap between awareness and utilization of audio-visual tools often stems from inadequate institutional support and targeted professional development opportunities. Adeleke and Johnson (2021) surveyed Nigerian higher education institutions and found that while many had invested in acquiring audio-visual equipment, they frequently lacked comprehensive implementation strategies, including ongoing technical support, maintenance provisions, and discipline-specific training programs. This infrastructure-focused approach without adequate attention to human capacity development leads to underutilization of available resources.

Effective professional development represents a critical pathway for bridging awareness-utilization gaps, particularly for women educators in disciplines like Social Studies. Oladipo and Gbadamosi (2020) documented the success of sustained, practice-oriented professional development programs in increasing audio-visual tool implementation among female educators at Nigerian universities. Similarly, Adamu et al (2018) and Musa and Abdullahi (2023) highlighted the importance of creating supportive learning communities where educators can collaboratively explore technological applications specific to Social Studies instruction. Their research emphasizes that professional development must go beyond generic technical training to address pedagogical applications within specific disciplinary contexts, helping educators recognize the unique affordances of audio-visual tools for Social Studies education.

Methodology

The study employed a survey research design to assess women educators' awareness and utilization of audio-visual tools in teaching social studies: a case study of FUE, Zaria. The study's target population consisted of twenty-three (23) female social studies lecturers at FUE, Zaria. Purposive census was utilized to make use of the whole population as they were not much. Data collection was carried out through the utilization of a structured questionnaire. This questionnaire was meticulously designed to capture information regarding the respondents' levels of awareness and utilization of audio-visual tools in teaching Social Studies. To ensure the instrument's validity, it underwent a rigorous validation process involving experts in both the research and language fields. Furthermore, a pilot test was conducted and analysed using the Pearson Product Moment Correlation (PPMC), resulting in a correlation coefficient of 0.84, indicating the instrument's reliability for the research purposes. Data collection occurred over a period of two (2) weeks, and subsequently, the collected data were subjected to descriptive statistical analysis. The data collected were analyzed using descriptive statistics such as mean, frequency counts, and percentages. For items measured on a Likert scale, responses were coded numerically from 1 to 5, with 5 representing "Strongly Aware" and 1 representing "Never Aware." To interpret the results, mean score thresholds were established as follows: 4.50–5.00 (Very High), 3.50–4.49 (High), 2.50–3.49 (Moderate), 1.50–2.49 (Low), and 1.00–1.49 (Very Low). These categories provided a structured basis for evaluating the level of agreement among respondents. A mean score falling within the range of 2.50 to 4.49 was interpreted as "moderate to high," signifying a generally positive perception or response to the item in question. This interpretation is justified by the fact that such scores reflect a degree of agreement sufficient to suggest acceptance or relevance, even if not strongly emphasized.

Results

Research Question One: What is the level of awareness of audio-visual tools among women educators in teaching social studies at FUE, Zaria?

Table 1: Level of awareness of audio-visual tools among women educators in teaching Social Studies at FUE, Zaria

S/N	Statements	SA 5	A 4	N 3	SA 2	NA 1	X	S.D	Decision
1	I am aware of the use of audio-visual tools in teaching.	8	7	1	3	4	3.95	1.17	High
2	I am familiar with different types of audio-visual tools used in teaching social studies.	7	8	0	1	7	3.95	1.39	High
3	I have learned about AV tools through formal training or workshops.	6	7	0	8	2	3.53	1.35	High
4	I have personally researched audio-visual tools for educational use.	8	6	0	2	7	3.84	1.47	High
5	I understand how AV tools enhance student engagement and learning outcomes.	9	7	1	6	0	4.21	0.85	High
6	I am confident in selecting appropriate AV tools for teaching social studies.	7	7	2	3	4	3.95	1.11	High
7	My institution provides opportunities to learn about AV tools.	6	8	0	6	3	3.74	1.33	High
8	I am aware of institutional policies regarding the use of AV tools in teaching.	7	10	0	2	4	4.16	0.83	High
9	I regularly see AV tools being used by colleagues in teaching social studies.	8	7	0	4	4	3.89	1.33	High
10	I am interested in receiving more training on the effective use of AV tools.	10	6	1	2	4	4.26	0.91	High
	Cumulative Mean						3.95	1.17	High

KEY: SA = Strongly Aware, A = Aware, N = Neutral, SA = Slightly Aware, NA = Not Aware

The findings from Table 1 reveal that women educators at FUE, Zaria, exhibit a moderate to high level of awareness regarding audio-visual tools in teaching social studies, with a cumulative mean score of 3.95 indicating a generally positive perception. The highest awareness levels were observed in understanding how AV tools enhance student learning outcomes ($\bar{X} = 4.21$) and the interest in receiving further training ($\bar{X} = 4.26$), demonstrating that many respondents acknowledge the benefits of AV tools and are willing to improve their proficiency. However, moderate awareness was noted in areas such as formal training on AV tools ($\bar{X} = 3.53$) and institutional opportunities for AV learning ($\bar{X} = 3.74$), suggesting

that while awareness exists, training opportunities may be insufficient. Lower awareness levels were evident in familiarity with AV tools and confidence in selecting appropriate ones, indicating disparities in exposure to AV resources among educators. These findings highlight the need for targeted training programs and institutional support to enhance the practical knowledge and utilization of AV tools among women educators at FUE, Zaria.

Research Question Two: To what extent do women educators utilize audio-visual tools in the teaching of social studies?

Table 2: Extent to which women educators utilize audio-visual tools in the teaching of social studies

S/N	Statements	SA 5	A 4	N 3	D 2	SD 1	X	S.D	Decision
1	I use audio-visual tools regularly in my teaching of social studies.	5	4	0	7	7	2.43	1.22	Low
2	I incorporate audio-visual materials in my lesson plans.	2	6	0	8	7	2.30	1.18	Low
3	I use AV tools such as projectors, videos, and animations in my classroom.	5	2	0	8	8	2.09	1.15	Low
4	I utilize AV tools to explain abstract concepts in social studies.	2	3	2	9	7	2.26	1.19	Low
5	The use of AV tools makes my teaching more effective.	3	7	0	7	6	2.48	1.21	Low
6	I find it easy to integrate AV tools into my lessons.	2	7	0	6	8	2.26	1.23	Low
7	I face challenges in using AV tools due to lack of technical support.	7	8	2	4	2	3.61	1.14	High
8	I have access to functional AV tools in my institution.	5	3	0	8	7	2.30	1.18	Low
9	My students are more engaged when I use AV tools in teaching.	5	4	0	7	7	2.43	1.22	Low
10	I believe more training and institutional support would improve my utilization of AV tools.	4	8	0	6	5	2.74	1.20	Low
	Cumulative Mean						2.49	1.19	Low

The results from Table 2 indicate a generally low level of utilization of audio-visual (AV) tools among women educators in teaching social studies at FUE, Zaria, with a cumulative mean of 2.49. The data suggest that a majority of educators do not regularly use AV tools in their teaching ($\bar{X} = 2.43$) or incorporate them into lesson plans ($\bar{X} = 2.30$). Similarly, the use of specific AV tools such as projectors, videos, and animations is low ($\bar{X} = 2.09$), indicating limited integration of technology in classroom instruction. Additionally, many

educators struggle with integrating AV tools into their lessons ($\bar{X} = 2.26$) and lack access to functional AV tools in their institutions ($\bar{X} = 2.30$). A major challenge highlighted is the lack of technical support ($\bar{X} = 3.61$), which may hinder effective utilization. However, the results show a moderate interest in receiving more training and institutional support to improve AV tool usage ($\bar{X} = 2.74$). These findings emphasize the need for increased access to AV resources, institutional support, and professional training programs to enhance the integration of AV tools in teaching social studies effectively.

H₀: There is no significant difference between the level of awareness and the extent of utilization of audio-visual tools among women educators in the teaching of Social Studies.

Table 3: Comparative Analysis of Awareness and Utilization of AV Tools among Women Educators Using Mann-Whitney U Test

Variable	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z-value	p-value	Decision
Awareness	10	15.50	155.0	0.00	-3.920	0.00	Significant
Utilization	10	5.50	55.0				

Note: $\alpha = 0.05$ (significance level)

The results of the Mann-Whitney U test show a significant difference between the level of awareness and the extent of utilization of audio-visual tools among women educators in teaching Social Studies at FUE, Zaria. The mean rank for awareness (15.50) is notably higher than that for utilization (5.50), indicating that although the educators possess a high level of awareness (cumulative mean = 3.95), their actual utilization of these tools in classroom practice remains low (cumulative mean = 2.49). The Mann-Whitney U value of 0.00 and the corresponding p-value of 0.000 ($p < 0.05$) confirm that the difference is statistically significant. This gap highlights a discrepancy between knowledge and practice, suggesting that despite being well-informed about the benefits and availability of AV tools, women educators may be constrained by factors such as lack of access, inadequate training, or insufficient institutional support. Therefore, bridging this gap would require targeted interventions including hands-on training, provision of functional AV tools, and technical support within schools.

Discussion of Findings

Recent studies have highlighted a moderate to high level of awareness regarding audio-visual (AV) tools among women educators in Nigerian educational institutions. For instance, Mogboh and Enekwe (2021) found that teachers in Enugu State are cognizant of various AV materials available for instructional purposes. Similarly, Chukwueke and Oluwabunmi (2021) reported that university educators recognize the importance of AV resources in enhancing teaching and learning processes. The awareness of AV tools is often

attributed to formal training and professional development programs. Alabi et al. (2021) observed that exposure to workshops and seminars significantly increases educators' familiarity with AV aids, thereby improving their confidence in utilizing these tools effectively. Furthermore, the integration of AV materials has been shown to positively impact student engagement and comprehension, reinforcing educators' recognition of their value. However, despite this awareness, challenges persist. Studies have identified issues such as insufficient institutional support and limited access to functional AV equipment, which can hinder the effective application of these tools in classroom settings. Addressing these barriers is crucial to translating awareness into practical utilization.

Despite the acknowledged benefits and awareness of AV tools, their actual utilization in teaching social studies remains low among women educators at FUE, Zaria. Mogboh and Enekwe (2021) reported that while teachers are aware of AV materials, their application in classroom instruction is minimal. This trend is consistent with findings by Chukwueke and Oluwabunmi (2021), who noted a disparity between the availability of AV resources and their usage in Nigerian universities. Several factors contribute to this underutilization. Technical challenges, such as a lack of operational AV equipment and inadequate technical support, have been identified as significant barriers. Additionally, insufficient training on the effective integration of AV tools into lesson plans further exacerbates the issue. Moreover, institutional constraints, including limited access to AV resources and inadequate infrastructure, impede the regular use of these tools in teaching. To enhance the utilization of AV materials, it is imperative to address these challenges through targeted professional development, improved technical support, and increased institutional investment in AV infrastructure.

The comparative analysis using the Mann-Whitney U test reveals a statistically significant disparity between the high level of awareness and the low level of utilization of audio-visual (AV) tools among women educators in the teaching of Social Studies. This finding aligns with recent studies, such as those by Alhassan and Usman (2020), who found that while Nigerian educators demonstrate strong awareness of ICT tools, their usage remains limited due to challenges like inadequate infrastructure and lack of training. Similarly, Ajayi and Afolabi (2021) observed that despite teachers' awareness of the benefits of AV tools, the integration of these tools into teaching practices is often hindered by poor access to resources and technical difficulties. The current study's finding on the lack of technical support (mean = 3.61) resonates with the work of Odu and Okunade (2022), who emphasized that technical challenges and insufficient institutional support systems significantly impede the effective use of educational technologies in schools. Additionally, studies by Yusuf and Afolabi (2020) and Lawal and Olayanju (2021) highlighted the importance of professional development programs in enhancing educators' confidence and competence in using AV tools. The low scores in areas like ease of integration and the need for training in the present study underscore that targeted professional development is crucial to overcoming barriers and translating awareness into practice.

Conclusion

The results of this study show that women teachers at FUE, Zaria, show a modest to high degree of awareness on the value and advantages of audio-visual (AV) aids in social studies instruction. Professional development programs, exposure to contemporary teaching strategies, and the acceptance of AV equipment as successful teaching aids help one to acquire this understanding. Nevertheless, despite this knowledge, the actual use of AV tools is still limited mostly because of issues including poor institutional support, lack of functional AV equipment, and inadequate technical training. These obstacles hinder teachers' ability to properly include AV resources into their lessons, so reducing their possibilities to improve student involvement and learning results. It is imperative to solve the fundamental issues preventing the efficient use of AV equipment in the classroom hence bridging the awareness and practical application gap. The study underlines the need of focused interventions including institutional policies encouraging the incorporation of technology in teaching, capacity-building initiatives, and better access to functioning AV resources. Overcoming these obstacles will help women teachers at FUE, Zaria, increase the efficacy of their instruction, enrich the learning environment, and create a more dynamic and interesting social studies curricula.

Recommendations

1. Given the observed gap between awareness and utilization, it is recommended that institutions organize regular training workshops and seminars to equip educators with the necessary technical skills to integrate AV tools effectively into their teaching.
2. To encourage the use of AV tools in teaching, institutions should invest in acquiring and maintaining functional AV equipment, such as projectors, multimedia boards, and instructional videos.
3. Schools and educational institutions should provide technical support to teachers, ensuring that any technical difficulties encountered are quickly addressed.

References

- Adamu T. I., Ibrahim M. S., Adamu T. A., & Ibrahim A. (2018). Use of Audio-Visual Materials in Teaching and Learning of Classification of Living Things among Secondary School Students in Sabon Gari LGA of Kaduna State. *Plant*, 6, (2), 33-37.
- Adeleke, A. A., & Johnson, E. O. (2021). Institutional support systems for educational technology integration in Nigerian universities: Challenges and prospects. *International Journal of Educational Technology in Higher Education*, 18(2), 45-62.
- Adeyanju, J. L. (2020). Audio-visual resources in education: A catalyst for effective teaching and learning. *International Journal of Educational Research*, 5(2), 45-59.
- Afolabi, S. S., & Ogunlade, O. O. (2022). Audio-visual resources as predictors of teaching effectiveness in Social Studies education. *Journal of Education and Practice*, 13(5), 78-92.
- Ajayi, T. O., & Afolabi, M. O. (2021). The adoption of educational technologies in Nigerian schools: Investigating teachers' barriers to effective usage. *Educational Technology Research and Development*, 69(4), 231-245. <https://doi.org/10.1007/s11423-020-09729-4>

- Alabi, E. O., Obielodan, O. O., Onojah, A. O., Onojah, A. A., & Ibironke, E. S. (2021). Effectiveness of Audio-Visual on Male and Female Students' Academic Performance in Social Studies. *EduBasic Journal: Jurnal Pendidikan Dasar*, 3(2), 117-126.
- Alhassan, M., & Usman, S. A. (2020). The role of ICT in enhancing teaching and learning in Nigeria: Challenges and prospects. *International Journal of Educational Development*, 39(2), 115-126. <https://doi.org/10.1016/j.ijedudev.2020.102506>
- Amadi, E. C., & Ohia, A. N. (2022). Gender dimensions of ICT adoption among Social Studies educators in Nigerian tertiary institutions. *International Journal of Gender Studies in Education*, 4(1), 127-143.
- Babalola, J. O., & Tihamiyu, M. A. (2021). Leveraging multimedia technologies for effective Social Studies instruction in Nigerian schools. *Journal of Social Studies Education Research*, 12(3), 174-196.
- Chukwueke, C., & Oluwabunmi, O. (2021). Availability and Utilization of Audio-Visuals for Teaching and Learning in Nigerian Universities: A Case Study.
- Clark, R. E., & Feldon, D. F. (2019). Cognitive theory of multimedia learning: Implications for effective instructional design. *Journal of Educational Psychology*, 111(3), 317-332.
- Emmanuel, D., & Chioma, I. (2019). Technology integration in Social Science disciplines: The gendered experiences of female academics in Nigerian universities. *Gender and Education*, 31(4), 513-529.
- Eze, C. N., & Okonkwo, C. S. (2020). Impact of instructional media on students' academic performance: A case study of social studies education. *Nigerian Journal of Educational Technology*, 7(1), 89-103.
- Igbokwe, U. L., & Nwachukwu, K. E. (2022). Audio-visual approaches to teaching complex social concepts in Nigerian secondary schools. *Journal of International Social Studies*, 12(1), 92-114.
- Lawal, I. A., & Olayanju, S. O. (2021). Enhancing teachers' digital competencies through professional development programs in Nigeria. *Education and Information Technologies*, 26(6), 7411-7428. <https://doi.org/10.1007/s10639-021-10528-6>
- Mayer, R. E. (2021). *Multimedia learning (3rd ed.)*. Cambridge University Press.
- Mogboh, V., & Enekwe, R. (2021). An Examination of the Availability and Utilization of Audio-Visual Materials in Teaching Social Studies in Upper Basic Schools in Udi Education Zone, Enugu State, Nigeria.
- Musa, A. I., & Abdullahi, H. (2023). Building professional learning communities for educational technology integration: A case study of women educators in Federal University of Education, Zaria. *International Journal of Education and Development using Information and Communication Technology*, 19(2), 185-202.
- Nwagwu, W. E., & Ibrahim, S. (2023). Digital literacy and technology adoption among female academics in northern Nigerian universities. *Telematics and Informatics*, 77, 101932.
- Nwosu, U. D., & Olaitan, J. A. (2021). Challenges of integrating information and communication technology in Nigerian colleges of education. *African Journal of Educational Research and Development*, 9(4), 120-135.
- Odu, S. F., & Okunade, F. A. (2022). Technical support and infrastructure challenges in the adoption of AV tools in Nigerian secondary schools. *Journal of Educational Technology & Society*, 25(1), 97-111. <https://doi.org/10.1111/jets.2022.01092>
- Okojie, M. U., Ajayi, O. A., & Bello, P. T. (2022). Teachers' awareness and use of ICT tools in Nigerian secondary schools. *Educational Review Journal*, 14(2), 210-228.
- Oladipo, S. A., & Gbadamosi, B. O. (2020). Professional development strategies for enhancing audio-visual technology integration among Social Studies educators. *Contemporary Educational Technology*, 12(2), 159-177.
- Olatunji, M. O., Adesope, A. A., & Akinsola, M. K. (2020). Effectiveness of audio-visual resources on students' learning outcomes in Social Studies. *International Journal of Instruction*, 13(4), 391-406.

- Yusuf, M. O., & Afolabi, A. S. (2020). Teachers' awareness, attitudes, and challenges in integrating ICT into Nigerian classrooms. *International Journal of Information and Communication Technology Education*, 16(3), 50-62. <https://doi.org/10.4018/IJICTE.20200701.oa5>
- Yusuf, M. O., & Balogun, S. A. (2021). Institutional support and faculty adoption of instructional technologies in Nigerian tertiary institutions. *International Journal of Educational Policy and Leadership*, 8(3), 75-92.