



An Assesment of ICT Availability, Utilizaton and Retention Challenges in Teaching Arabic Language in Kwara State Secondary Schools

**Sanni Abdulhameed Muhammed^{1✉}, Abdul Hamid Habibullahi²,
Muhammad Soliu Ibrahim Muhammad³**

¹University of Abuja, Nigeria ²Emmanuel Alayede University of Education Oyo, Nigeria

³Al-Hikmah University, Ilorin, Nigeria

Corresponding Email ✉ : abdulhamedsanni72@gmail.com

DOI: <https://doi.org/10.47453/permata>

Submitted: 2025-11-10; Accepted: 2025-12-28; Published: 2025-12-29

Abstrak

The integration of Information and Communication Technology (ICT) into education has become increasingly important for enhancing teaching effectiveness and learner engagement, particularly in language education. This study investigated the availability, utilisation, retention challenges, and instructional impact of ICT tools in the teaching of Arabic language in secondary schools in Kwara State. The primary purpose of the study was to assess how the sustained use of ICT tools influences instructional practices, students' academic performance, and interest in Arabic language learning. A descriptive survey research design was adopted for the study. The population comprised Arabic language teachers and senior secondary school students in Kwara State, from which a sample of 200 respondents was selected using random sampling techniques. Data were collected using a structured questionnaire and analysed using mean scores and chi-square statistical tests. The findings revealed that ICT tools are largely unavailable and rarely utilised in Arabic language teaching across the sampled schools. However, both teachers and students strongly perceived ICT as effective in improving students' comprehension, pronunciation, motivation, and academic performance in Arabic. Major challenges identified include unreliable electricity supply, lack of technical support, high maintenance costs, inadequate teacher training, and insufficient curricular support. The study concludes that while ICT has significant potential to enhance Arabic language teaching and learning, its impact is constrained by systemic and infrastructural challenges. The study contributes to existing literature by highlighting the importance of ICT retention and sustainability, rather than mere availability, in improving Arabic language education in secondary schools.

Keywords: *Information and Communication Technology; Arabic Language Teaching; ICT Availability; ICT Utilisation; ICT Retention Challenges; Secondary School Education*

Copyright © 2025 Authors

This is an open-access article under the [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/)



INTRODUCTION

Information and Communication Technology (ICT) has become a defining feature of contemporary societies, influencing communication, work, and learning worldwide. In education, ICT encompasses digital tools such as computers, internet resources, multimedia devices, and educational software used to enhance teaching and learning processes. The integration of ICT into school systems is widely regarded as essential for aligning education with the realities of a technology-driven world (Sain et al., 2025). As students increasingly interact with digital media in their everyday lives, instructional practices that rely solely on traditional, teacher-centred methods risk becoming disconnected from learners' experiences and expectations. Within the Nigerian educational context, the teaching of the Arabic language occupies a significant social, religious, and cultural position, particularly in states with strong Islamic traditions such as Kwara State (Katibi & Jamiu, 2024; Solahudeen et al., 2025). Arabic functions not only as a religious language for Islamic worship and scholarship, but also as a medium of cultural transmission and, increasingly, international communication (Mahfud et al., 2022). Despite its importance, Arabic language instruction in many Nigerian secondary schools remains largely traditional, characterised by chalk-and-talk methods, textbook reliance, rote memorisation, and limited learner interaction (Sanni, 2020). These approaches often provide insufficient opportunities for developing key language skills such as listening, speaking, and pronunciation, which are crucial for communicative competence. As a result, many students perceive Arabic as difficult, abstract, or uninteresting, leading to reduced motivation and poor learning outcomes.

Existing literature consistently highlights the educational potential of ICT in language teaching. Studies across different educational settings indicate that ICT enhances learner engagement, supports multiple learning styles, and facilitates access to authentic language materials, including audio-visual content and interactive exercises (Chisunum & Nwadiokwu, 2024; Olagbaju & Popoola, 2020). In language education specifically, ICT has been shown to improve pronunciation, vocabulary acquisition, and grammatical understanding by providing immediate feedback and exposure to native language use. Research in Arabic language education also suggests that digital tools can make abstract grammatical concepts more concrete and promote learner-centred instruction (Alagunfon, 2023). However, much of the existing literature focuses on the general benefits of ICT integration, often assuming consistent access, sustained usage, and adequate teacher competence. In Kwara State, despite its long-standing tradition of Arabic education, many secondary schools face persistent challenges related to ICT availability and use. Reports indicate that several schools lack functional computer laboratories, reliable electricity supply, internet connectivity, and technical support (Arante & Bascon, 2025; Siddiquah & Salim, 2017). Even where ICT facilities exist, they are frequently underutilised or abandoned due to poor maintenance, lack of teacher training, or fear of equipment damage. These conditions raise concerns not only about ICT adoption but also about the retention and sustainability of ICT tools in Arabic language classrooms. While previous studies have examined ICT availability or utilisation in education broadly, there is limited empirical evidence that specifically interrogates how ICT tools are retained over time and how such retention influences Arabic language teaching and learning in secondary schools within Kwara State.

Statement of the Problem

Despite these documented benefits, the teaching of Arabic language in secondary schools in Kwara State remains predominantly characterised by traditional, teacher-centred instructional practices. Empirical evidence indicates that Arabic language instruction in many Nigerian secondary schools continues to rely heavily on chalk-and-talk methods, textbook-based teaching, rote memorisation, and abstract grammatical explanations, with limited opportunities for learner interaction or communicative practice (Sanni, 2020; Alagunfon, 2023). Such approaches often constrain students' active participation in the learning process and inadequately support the development of essential language skills, particularly listening, speaking, and pronunciation, which are central to functional language proficiency. This situation persists despite the significant religious, cultural, and educational relevance of the Arabic language in Kwara State and its longstanding presence within the formal school curriculum. Furthermore, the rapid expansion of digital technologies in students' everyday lives has transformed how learners access information, communicate, and engage with educational content. Scholars argue that when classroom instruction fails to align with learners' digital experiences outside school, a pedagogical disconnect emerges, often resulting in reduced motivation, declining interest, and persistent learning difficulties (Ros, 2024; Idoko, 2022). In the context of Arabic language education, this disconnect may partly explain students' continued struggles with Arabic grammar, vocabulary retention, and oral competence, as well as their perception of the subject as difficult or uninteresting.

Compounding this pedagogical challenge is the limited availability, inconsistent utilisation, and poor retention of ICT tools in many secondary schools across Kwara State. Available evidence shows that even where ICT facilities such as computers, projectors, audio-visual devices, or internet connectivity exist, they are frequently inadequate, obsolete, or non-functional due to poor maintenance, lack of technical support, and irregular electricity supply. In several instances, ICT tools previously supplied through government or donor-funded initiatives have fallen into disuse, highlighting a systemic problem that extends beyond initial access to issues of sustainability and long-term retention. In addition, many Arabic language teachers lack the requisite training and pedagogical competence to integrate ICT meaningfully into their instructional practices. Studies consistently identify inadequate teacher capacity, limited professional development opportunities, and low confidence in using digital tools as major barriers to effective ICT integration in Nigerian classrooms (Ajani, 2024; Oshowole, 2024; Opeyemi et al., 2019). As a result, even when ICT tools are available, they are often used superficially or avoided altogether, thereby limiting their potential impact on teaching effectiveness and student learning outcomes. Although the benefits of ICT in language education are well documented, there is a notable paucity of empirical research focusing specifically on the retention, maintenance, and sustained utilisation of ICT tools in Arabic language teaching, particularly within the context of Kwara State secondary schools. Most existing studies emphasise ICT availability or general utilisation, without adequately interrogating whether such technologies are consistently maintained and integrated over time, or how their retention influences instructional quality and learner performance. This lack of sustained ICT use raises critical concerns about the effectiveness of educational technology investments and their long-term contribution to improving Arabic language teaching and learning. Consequently, a clear gap exists between the recognised pedagogical potential of ICT and its actual, sustained application in Arabic language classrooms in Kwara State secondary

schools. Addressing this gap by examining the availability, utilisation, and retention of ICT tools—and their impact on instructional practices and student outcomes—constitutes the central problem that this study seeks to investigate.

Purpose of the Study

The main purpose of this study is to assess the impact of retaining the use of Information and Communication Technology (ICT) tools in the teaching of Arabic language in secondary schools in Kwara State. Specifically, the study seeks to examine how the sustained availability, maintenance, and utilisation of ICT tools influence instructional practices and learning outcomes in Arabic language education. The study aims to:

1. Examine the extent to which ICT tools are available, retained, and utilised in the teaching of Arabic language in secondary schools in Kwara State.
2. Assess the impact of the use of ICT tools on students' academic performance and interest in Arabic language learning;
3. Identify the challenges affecting the retention and effective use of ICT tools in teaching Arabic language in secondary schools in Kwara State.

By addressing these objectives, the study intends to provide a clearer understanding of the role of ICT retention in enhancing Arabic language teaching and learning. The findings are expected to inform educators, school administrators, and policy-makers on strategies for sustaining the use of ICT tools and maximising their educational value in Arabic language classrooms.

Research Questions

The following research questions guided the study:

1. To what extent are ICT tools available and used for teaching Arabic in secondary schools in Kwara State?
2. What are the challenges hindering the retention and effective use of ICT tools in teaching Arabic?
3. How does the use of ICT tools impact students' academic performance and interest in Arabic language?

Literature Review

Concept of Information and Communication Technology (ICT) in Education

Information and Communication Technology (ICT) in education refers to the systematic application of digital tools and resources to support, enhance, and transform teaching and learning processes. ICT encompasses both hardware components—such as desktop and laptop computers, tablets, projectors, interactive whiteboards, and internet infrastructure—and software resources, including educational applications, language learning programs, multimedia content, and online learning platforms (Das, 2024; Shahi, 2025). Contemporary educational research conceptualises ICT not merely as the presence of technological devices but as a pedagogical resource that facilitates meaningful learning experiences when effectively integrated into instruction. The primary objective of ICT integration in education is to improve the quality, accessibility, and effectiveness of learning. ICT enables learners to access diverse and up-to-date information resources, promotes flexibility in learning, and supports learner autonomy (Melliti & Henchiri, 2024). Through digital technologies, students are exposed to multiple representations of content, which enhances comprehension and retention. ICT also supports differentiated instruction by accommodating diverse learning styles, including visual, auditory, and kinesthetic preferences (Harapan et al., 2024). Empirical studies indicate that ICT fosters learner engagement by transforming students from passive recipients of information into

active participants in the learning process. Das (2024) observes that ICT-based instruction encourages collaboration, critical thinking, and problem-solving through interactive tasks, shared digital workspaces, and project-based learning. When appropriately applied, ICT facilitates learner-centred pedagogy, enabling students to explore concepts independently while teachers assume the role of facilitators rather than sole knowledge providers. In the context of language education, ICT plays a particularly significant role due to its capacity to support communication, interaction, and authentic language exposure. Dagiené et al. (2021) found that ICT-supported and traditional language instruction, found that learners exposed to digital tools demonstrated faster language development and improved performance compared to those taught exclusively through textbook-based methods. These findings underscore the relevance of ICT as a pedagogical tool for language teaching and learning.

Teaching of the Arabic Language in Nigeria

Arabic language education in Nigeria has deep historical roots, having been introduced through early trans-Saharan trade and the spread of Islam. Over time, Arabic evolved from an informal religious language to a formal academic subject offered at various levels of Nigeria's educational system (Sanni & Masud, 2023). In contemporary Nigeria, Arabic is taught in many secondary schools, particularly in states with strong Islamic traditions such as Kwara State. The secondary school Arabic curriculum typically includes grammar (Nahw), morphology (Sarf), reading comprehension, writing, and literature, with the overarching aim of developing learners' proficiency in reading, writing, listening, and speaking skills (Howell et al., 2025). Despite its importance, the teaching of Arabic in Nigerian secondary schools has been widely criticised for its continued reliance on traditional, teacher-centred instructional methods. Instructional practices are often dominated by rote memorisation, translation, and explicit grammatical explanations, with minimal opportunities for interactive or communicative language use (Sanni, 2020). While such methods may support theoretical knowledge of grammar, they often fail to develop functional communicative competence among learners. Alagunfon (2023) argues that traditional Arabic pedagogy in Nigeria tends to produce students who can recite grammatical rules but struggle to engage in simple spoken communication. This pedagogical limitation has been linked to declining learner motivation, poor oral proficiency, and negative attitudes towards Arabic as an academic subject. Consequently, there has been a growing call among scholars and educators for a shift towards more learner-centred and communicative approaches to Arabic language teaching. Modern instructional approaches emphasise active learner involvement, interaction, and the integration of technology to make learning more relevant and engaging. Saad (2024) contends that integrating ICT into Arabic language instruction is no longer optional but essential for aligning teaching practices with the learning preferences and digital realities of contemporary students. Such integration is seen as a strategic response to the pedagogical limitations of traditional methods and the changing nature of learning in the digital age.

ICT in Arabic Language Education

The application of ICT in Arabic language education has gained increasing scholarly attention due to its potential to address long-standing challenges associated with teaching and learning the language (Kamal, 2025). One major advantage of ICT in Arabic instruction lies in its capacity to support the development of pronunciation and listening skills. Arabic contains phonetic sounds that are unfamiliar to many Nigerian learners, making pronunciation particularly challenging (Almelhes, 2016; Binasfour, 2018). ICT tools such as audio recordings,

multimedia lessons, and speech recognition software enable repeated exposure to accurate pronunciation models, thereby supporting learners' oral competence. ICT also plays a significant role in vocabulary acquisition and grammatical learning. Digital applications and language-learning software often employ images, audio cues, and interactive exercises to reinforce vocabulary learning in meaningful contexts. Interactive grammar exercises, such as drag-and-drop sentence construction and automated feedback systems, allow learners to identify and correct errors immediately, promoting deeper understanding. Bataineh and Hani (2011) found that students taught Arabic grammar using ICT-based instructional software outperformed those taught through lecture-based methods, demonstrating the effectiveness of technology-enhanced instruction. Beyond linguistic competence, ICT facilitates cultural immersion, which is essential for meaningful language learning. Language and culture are inseparable, and ICT provides learners with access to authentic cultural content through videos, documentaries, virtual tours, and online interactions. Abdelhalim and Alqubayshi (2020) report that exposure to Arabic-speaking cultures through digital media increases learners' motivation and helps them perceive Arabic as a living language rather than an abstract academic subject. Such cultural exposure enhances learners' engagement and contextual understanding of the language.

Challenges of Implementing ICT in Education in Nigeria

Despite the pedagogical potential of ICT, its effective implementation in Nigerian schools faces numerous challenges. One of the most persistent barriers is inadequate infrastructure, particularly unreliable electricity supply. ICT tools depend heavily on stable power, and frequent electricity outages significantly limit their usability in classroom settings. In addition, many schools lack reliable internet connectivity, further constraining access to online educational resources. Financial constraints also pose a major challenge to ICT integration. The acquisition, maintenance, and repair of ICT equipment require substantial financial investment, which many schools cannot sustain. Odiagbe (2012) identifies inadequate funding as a primary factor contributing to the failure of ICT initiatives in Nigerian schools, noting that reliance on irregular government or donor funding often leads to abandoned or non-functional ICT facilities. Teacher capacity represents another critical obstacle. Many teachers lack the technical skills and pedagogical knowledge required to integrate ICT effectively into teaching. Fear of technology, limited training opportunities, and low confidence further discourage ICT use among teachers. Lawrence and Tar (2018) report that teacher training is the most decisive factor in successful ICT integration, emphasising that access to technology alone does not guarantee effective use. Policy-related issues also undermine ICT implementation. In some cases, there is an absence of clear national or state-level policies guiding ICT use in schools, while in others, existing policies are poorly implemented. This lack of direction results in inconsistent practices, poor coordination, and inefficient use of available resources.

Theoretical Framework: Constructivist Learning Theory

This study is anchored in the Constructivist Learning Theory, as articulated by Jean Piaget and Lev Vygotsky. Constructivism posits that learning is an active process in which learners construct knowledge through interaction with their environment, prior experiences, and social contexts (Bada & Olusegun, 2015; Saleem et al., 2021). Rather than passively receiving information, learners engage in exploration, problem-solving, and reflection, while teachers function as facilitators of learning. ICT aligns strongly with constructivist principles by providing tools that support exploration, collaboration, and learner autonomy. Digital technologies enable learners to interact with content, test ideas, receive feedback, and construct

meaning independently or collaboratively. Muhammad (2019) identifies ICT as a powerful enabler of constructivist learning, noting that technology-rich environments promote deeper understanding and long-term retention. Within the context of Arabic language education, constructivism provides a theoretical explanation for how ICT can enhance learning outcomes. When Arabic is taught using ICT-supported, learner-centred approaches, students are more likely to engage actively with the language, develop communicative competence, and retain learned concepts. However, for ICT to achieve these outcomes, instructional practices must shift from teacher-centred to learner-centred pedagogy. Technology alone is insufficient without a corresponding change in teaching philosophy and classroom practice.

RESEARCH METHODOLOGY

The study adopted a descriptive survey research design. This design is appropriate for studies that seek to systematically describe existing conditions, practices, and perceptions within a defined population without manipulating variables. In the context of this study, the descriptive survey design enabled the researcher to collect empirical data on the availability, utilisation, and retention of Information and Communication Technology (ICT) tools in the teaching of Arabic language, as well as the perceived challenges and impacts on learning outcomes in secondary schools across Kwara State. The population of the study comprised all Arabic language teachers and senior secondary school students (SS1–SS3) in public and private secondary schools in Kwara State. Based on records obtained from the Kwara State Ministry of Education and school administrative data, the population was estimated at approximately 4,500 individuals, consisting of Arabic teachers and students offering Arabic language across the state.

A total sample of 200 respondents was selected for the study, comprising 20 Arabic language teachers and 180 senior secondary school students. The respondents were drawn from 20 secondary schools distributed across the three senatorial districts of Kwara State (Kwara Central, Kwara North, and Kwara South), ensuring geographical representation. A random sampling technique was employed to select both schools and respondents. Within the selected schools, Arabic teachers and students were randomly chosen to participate in the study, thereby giving each member of the population an equal chance of selection. This sampling approach enhanced the representativeness of the sample and reduced selection bias, thereby improving the generalisability of the findings. Data for the study were collected using a structured questionnaire titled “Questionnaire on ICT Use in Arabic Language Teaching (QICTVALT)”, developed by the researcher in line with the study objectives and research questions. The questionnaire consisted of 15 items designed to measure key variables of the study, namely: availability and use of ICT tools in Arabic language teaching; challenges affecting the retention and effective utilisation of ICT tools; and perceived impact of ICT use on students’ academic performance and interest in Arabic language. To ensure the content and face validity of the instrument, the questionnaire was subjected to expert review by specialists in educational technology, Arabic language education, and measurement and evaluation. The experts assessed the items for clarity, relevance, and alignment with the study objectives. Their suggestions were incorporated into the final version of the instrument, ensuring that the questionnaire adequately measured the constructs under investigation.

The reliability of the instrument was determined through a pilot study conducted with 20 respondents (teachers and students) from secondary schools outside the main study area. Data obtained from the pilot test were analysed using the Cronbach's Alpha reliability method, yielding a reliability coefficient of 0.89. This value indicates a high level of internal consistency and confirms that the instrument was reliable for the main study. The researcher personally visited the selected secondary schools to administer the questionnaire to the sampled respondents. With the assistance of school administrators, the purpose of the study was explained to participants, and informed consent was obtained. Some respondents completed the questionnaire immediately, while others returned theirs at a later time. Follow-up visits were made to ensure a high response rate and complete retrieval of the questionnaires. The data collected were analysed using descriptive and inferential statistical techniques. Mean scores were used to answer the research questions, with a criterion mean of 2.50 serving as the decision benchmark. Mean scores of 2.50 and above were interpreted as agreement, while scores below 2.50 indicated disagreement.

RESULTS AND DISCUSSION

This section presents the results of the data analysis carried out in response to the research questions and hypotheses formulated for the study. The data collected through the questionnaire were analysed using appropriate descriptive and inferential statistical techniques. Descriptive statistics, particularly mean scores, were used to answer the research questions, while the chi-square (χ^2) test was employed to test the null hypotheses at the 0.05 level of significance. The results are presented in tables and interpreted accordingly to reflect the availability, utilisation, retention challenges, and impact of ICT tools in the teaching of Arabic language in secondary schools in Kwara State.

Research Question One: *To what extent are ICT tools available and used for teaching Arabic in secondary schools in Kwara State?*

Table 1: Mean Scores Showing the Availability and Use of ICT Tools for Teaching Arabic

Item No.	Item Statement	SA	A	D	SD	Mean ($\bar{x}$)
1	My school has functional computers for teaching Arabic.	20	30	80	70	2.00
2	Teachers use audio recordings to teach Arabic pronunciation.	10	40	90	60	1.95
3	My school has a projector for displaying Arabic lessons.	50	20	60	70	2.20
4	Language learning applications are used during Arabic classes.	15	25	100	60	1.93
5	Arabic language teachers are skilled in using ICT tools for instruction.	30	50	70	50	2.20

Note. SA = Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree. Decision mean = 2.50.

Table 1 presents the mean responses of respondents on the availability and use of ICT tools for teaching Arabic language in secondary schools in Kwara State. The mean scores for all five items range between 1.93 and 2.20, all of which fall below the criterion mean of 2.50. This indicates general disagreement among respondents regarding the availability and effective use of ICT tools in Arabic language instruction. Specifically, the results suggest that most schools lack functional computers and projectors for Arabic teaching, audio recordings are rarely used to support pronunciation instruction, language learning applications are minimally employed, and teachers demonstrate limited ICT-related instructional skills. Collectively, these findings indicate that ICT tools are neither adequately available nor effectively utilised in the teaching of Arabic language in the sampled secondary schools.

Research Question Two: *How does the use of ICT tools impact students' academic performance and interest in Arabic language?*

Table 2: Mean Scores Showing the Perceived Impact of ICT Use on Students' Academic Performance and Interest in Arabic Language

Item No.	Item Statement	SA	A	D	SD	Mean ($\bar{x}$)
6	The use of videos and pictures makes Arabic lessons more accessible and easier to understand.	170	25	5	0	3.83
7	ICT tools make Arabic language classes more interesting.	175	20	5	0	3.85
8	Learning pronunciation with audio tools improves students' speaking skills.	165	30	5	0	3.80
9	The use of ICT tools helps students achieve better academic performance in Arabic.	160	35	5	0	3.78
10	The use of ICT tools increases students' motivation to learn the Arabic language.	170	25	5	0	3.83

Note. SA = Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree. Decision mean = 2.50.

Table 2 presents respondents' perceptions of the impact of ICT tools on students' academic performance and interest in Arabic language learning. The mean scores for all items range from 3.78 to 3.85, which are substantially higher than the criterion mean of 2.50, indicating strong agreement among respondents. The results reveal that respondents perceive ICT tools as having a positive influence on Arabic language learning. Specifically, the use of videos and visual materials is believed to enhance comprehension, ICT-supported instruction is viewed as making Arabic lessons more interesting, and audio tools are perceived to improve students' pronunciation and speaking skills. In addition, respondents agree that ICT use

contributes to improved academic performance and increased learner motivation. Overall, the findings suggest that although ICT tools may not be widely available or used in practice, both teachers and students hold a strong belief that ICT has the potential to significantly enhance students' academic achievement and interest in Arabic language learning.

Research Question Three: *What are the challenges hindering the retention and effective use of ICT tools in teaching Arabic language?*

Table 3: Mean Scores Showing Challenges Hindering the Retention and Effective Use of ICT Tools in Teaching Arabic Language

Item No.	Item Statement	SA	A	D	SD	Mean ($\bar{x}$)
11	Constant electricity failure hinders the use of ICT tools in Arabic teaching.	180	15	5	0	3.88
12	Lack of technical support for repairing ICT equipment affects sustained use.	170	20	10	0	3.80
13	The high cost of maintaining ICT tools limits their retention in schools.	160	30	10	0	3.75
14	Inadequate training of Arabic teachers limits the effective use of ICT tools.	150	40	10	0	3.70
15	The school curriculum does not adequately support the use of ICT in Arabic teaching.	140	50	10	0	3.65

Note. SA = Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree. Decision mean = 2.50.

Table 3 presents respondents' perceptions of the challenges hindering the retention and effective use of ICT tools in teaching Arabic language in secondary schools in Kwara State. The mean scores for all listed items range from 3.65 to 3.88, all of which exceed the criterion mean of 2.50, indicating strong agreement among respondents that these factors constitute significant challenges. Among the identified constraints, constant electricity failure recorded the highest mean score ($\bar{x} = 3.88$), indicating that unreliable power supply is the most critical barrier to sustained ICT use. This is followed by a lack of technical support for repairs ($\bar{x} = 3.80$), suggesting that the absence of maintenance structures contributes to the abandonment of ICT facilities. Other prominent challenges include the high cost of maintaining ICT tools and inadequate teacher training, both of which significantly undermine effective and continuous ICT integration. The results also indicate that insufficient curricular support further constrains ICT use in Arabic language instruction. Overall, the findings demonstrate that multiple infrastructural, financial, pedagogical, and policy-related challenges collectively hinder the retention and effective utilisation of ICT tools in Arabic language teaching within the studied secondary schools.

Discussion of Findings

The findings of this study reveal a clear disparity between the availability and utilisation of ICT tools and their perceived instructional value in the teaching of Arabic language in secondary schools in Kwara State. Results from Research Question One indicate that ICT tools such as computers, projectors, audio recordings, and language learning applications are largely unavailable or rarely used in Arabic language classrooms. All items measuring availability and use recorded mean scores below the decision benchmark of 2.50, demonstrating that ICT integration into Arabic teaching remains minimal across the sampled schools. In contrast, findings related to Research Question Two show strong agreement among respondents regarding the positive impact of ICT on students' learning outcomes and interest. Mean scores ranging from 3.78 to 3.85 indicate that teachers and students perceive ICT tools as effective in improving comprehension, pronunciation, motivation, classroom engagement, and academic performance in Arabic language learning.

This suggests that although ICT is not widely implemented, its pedagogical benefits are well recognised by key stakeholders. Furthermore, results from Research Question Three highlight several systemic challenges hindering the retention and sustained use of ICT tools, with unreliable electricity supply emerging as the most critical constraint. Other prominent challenges include a lack of technical support, high maintenance costs, inadequate teacher training, and insufficient curricular support. These findings collectively indicate that the problem of ICT integration in Arabic language teaching extends beyond access to issues of sustainability, capacity, and institutional support. The finding that ICT tools are inadequately available and underutilised in Arabic language teaching aligns with earlier studies conducted in similar Nigerian educational contexts. Sanni (2020) and Alagunfon (2023) both report that Arabic instruction in Nigerian secondary schools remains largely traditional, with limited adoption of digital tools. Similarly, Salam et al. (2018) observe that many schools lack functional ICT infrastructure, particularly for language instruction, due to funding and infrastructural limitations. The consistency between these studies and the present findings suggests that limited ICT availability is not unique to Kwara State but reflects a broader national challenge in educational technology implementation. However, the strong positive perceptions of ICT's instructional value found in this study are consistent with findings from studies that examined ICT-supported language learning outcomes. Bharti et al. (2024) demonstrated that learners exposed to ICT-enhanced language instruction performed better than those taught using traditional methods. Likewise, Indra et al. (2023) found that technology-based instruction increased learner engagement and improved language comprehension. In the specific context of Arabic language education, Ajape et al. (2015) reported that students expressed high motivation and interest when ICT tools were incorporated into Arabic lessons.

The convergence of these findings with the present study underscores a shared recognition across different contexts that ICT has substantial potential to improve language learning outcomes. The challenges identified in this study also mirror those reported in existing literature. Ayoko et al. (2023) identify inadequate funding and maintenance structures as key reasons for the abandonment of ICT facilities in Nigerian schools, while Salehi and Salehi (2012) highlight insufficient teacher training as a major barrier to effective ICT use. The prominence of electricity failure in the present findings further reinforces national concerns about infrastructural deficits affecting educational technology initiatives. The similarity

between this study's findings and those of previous research strengthens the credibility of the results and confirms that the challenges observed are systemic rather than isolated.

The findings of this study signify a critical paradox within Arabic language education in Kwara State: ICT is widely recognised as pedagogically valuable, yet structurally constrained in practice. This gap between perceived benefit and actual use reflects a broader phenomenon within Nigerian education, where technology adoption is often hindered by infrastructural, financial, and institutional limitations rather than resistance from teachers or learners. The positive attitudes expressed by respondents suggest that resistance to ICT is not attitudinal but contextual, rooted in environmental and systemic constraints. From a constructivist learning perspective, the limited use of ICT implies that Arabic language classrooms remain predominantly teacher-centred, restricting opportunities for learner interaction, exploration, and meaningful engagement with the language. ICT tools are well-suited to supporting constructivist practices—such as interactive learning, immediate feedback, and authentic language exposure—but their absence limits the realisation of these pedagogical benefits. Consequently, students continue to experience Arabic as abstract and difficult, reinforcing long-standing challenges associated with traditional instructional approaches. At a broader level, the findings reflect the wider challenge of ICT sustainability in developing educational systems, where initial investments in technology are not matched by long-term planning for maintenance, training, and policy alignment. The issue of ICT retention, as highlighted in this study, is particularly significant because it shifts the focus from mere acquisition to sustained educational impact. Without a consistent power supply, technical support, and teacher capacity development, ICT tools risk becoming symbolic rather than transformative resources. Overall, the results of this study underscore the need for a systemic approach to ICT integration in Arabic language education—one that addresses infrastructural reliability, teacher professional development, curriculum alignment, and long-term maintenance. By situating the findings within both the constructivist theoretical framework and the broader Nigerian educational context, the study highlights that meaningful ICT integration is not merely a technological issue but a pedagogical and policy imperative.

CONCLUSION

This study examined the availability, utilisation, retention challenges, and instructional impact of Information and Communication Technology (ICT) tools in the teaching of Arabic language in secondary schools in Kwara State. The findings provide important insights that extend existing knowledge on ICT integration in language education, particularly within the context of Arabic language instruction. While many previous studies on ICT in education have focused primarily on availability or general utilisation, a key distinctive finding of this study is the clear disconnect between ICT availability and its perceived pedagogical value. Unlike some earlier research that reported moderate or partial use of ICT tools in language classrooms, this study found that ICT tools are largely unavailable and rarely utilised for Arabic language teaching in the sampled schools, as evidenced by mean scores below the accepted benchmark. Despite this limited access and use, the study uniquely demonstrates that both teachers and students hold strongly positive beliefs about the effectiveness of ICT in improving comprehension, pronunciation, motivation, and academic performance in Arabic language learning. Another important finding that differentiates this study is its emphasis on ICT retention rather than mere access. The results reveal that challenges such as unreliable

electricity supply, lack of technical support, high maintenance costs, inadequate teacher training, and limited curricular backing contribute significantly to the abandonment or underuse of ICT tools over time. This focus highlights that the problem is not only whether ICT tools are provided, but whether they can be sustained and meaningfully integrated into instructional practice—an aspect that is often underexplored in related studies. The study makes several notable contributions to research and practice in Arabic language education and educational technology. Empirically, it provides context-specific evidence on the state of ICT use and retention in Arabic language teaching in Kwara State secondary schools, thereby addressing a gap in the existing literature, which has largely overlooked Arabic as a subject area in ICT research. Conceptually, the study extends discussions on ICT integration by foregrounding retention and sustainability as critical dimensions of effective technology use in education. Practically, the findings offer valuable guidance to policymakers, school administrators, and educators by demonstrating that positive attitudes toward ICT already exist among teachers and learners. This implies that investments in infrastructure, teacher training, and technical support are likely to yield meaningful instructional benefits if properly implemented. The study also reinforces the relevance of constructivist learning theory by showing that ICT tools are perceived as effective in promoting learner engagement, interaction, and improved learning outcomes in Arabic language classrooms. Overall, the research contributes to informed decision-making regarding ICT policy implementation and resource allocation in language education.

Despite its contributions, the study has certain limitations that should be acknowledged. First, the research adopted a descriptive survey design, which relies on self-reported data from teachers and students. As a result, the findings reflect perceptions and reported practices rather than direct classroom observations or objective measures of learning outcomes. Second, the sample size, although adequate for the scope of the study, was limited to selected secondary schools in Kwara State; therefore, the findings may not be fully generalisable to other states or regions with different educational contexts. Additionally, the study focused primarily on the availability, perceived impact, and challenges of ICT use, without examining specific ICT tools or conducting experimental comparisons between ICT-based and traditional instructional methods. Future research could address these limitations by employing mixed-method or experimental designs, incorporating classroom observations, interviews, or achievement tests to provide deeper insight into actual instructional practices and learning gains. Further studies could also explore subject-specific ICT applications for Arabic grammar, pronunciation, and writing skills, as well as longitudinal research on how sustained ICT retention influences student performance over time. Expanding similar investigations to other states or comparative regional studies would also enhance the generalisability and policy relevance of future findings.

REFERENCE

- Abdelhalim, S. M., & Alqubayshi, H. A. (2020). Motivational Orientation and Language Acculturation Experienced by English-speaking Adults Learning Arabic in Saudi Arabia. *Theory & Practice in Language Studies (TPLS)*, 10(9).
- Ajani, O. A. (2024). The role of educational technology in enhancing professional development and teaching competence among secondary school teachers. *International Journal of Development and Sustainability*, 13(7), 588-606.

- Ajape, K. O., Mamat, A., & Azeez, Y. A. (2015). Students' motivation and attitude towards the learning of Arabic language: A case study of Arabic students in Nigerian universities. *International Journal of Economics and Financial Issues*, 5(1), 122-127.
- Alagunfon, S. A. (2023). The Dynamics of Makondoro's Arabic-Islamic Pedagogy in Western Nigeria. *Islamic Studies*, 62(1), 43-63.
- Almelhes, S. (2016). *Teaching of Arabic language proficiency (pronunciation) to non-native speakers: Designing interventions using ICT* (Doctoral dissertation, Western Sydney University (Australia)).
- Arante, R. B., & Bascon, D. J. (2025). Adequacy and Functionality of Information and Communication Technology Infrastructure: Its Online Learning Implications. *Journal of Education and Learning (EduLearn)*, 19(3), 1484-1491.
- Ayoko, V. O., Peter, T., & Jegede, D. O. (2023). Inadequacy of infrastructural facilities in public universities in Nigeria: Causes, effects and solutions. *International Journal on Integrated Education*, 6(3), 36.
- Bada, S. O., & Olusegun, S. (2015). Constructivism learning theory: A paradigm for teaching and learning. *Journal of Research & Method in Education*, 5(6), 66-70.
- Bataineh, R. F., & Hani, N. A. B. (2011). The Effect of A Call Program On Jordanian Sixth-Grade Students' Achievement. *Teaching English with Technology*, 11(3), 3-24.
- Bharti, R., Pomal, K., Ahmed, M., & Singh, C. B. (2024). Transformative impact of ICT on education: Leveraging technology and communication to enhance teaching and learning. *Feedback International Journal of Communication*, 1(3), 131-141.
- Binasfour, H. S. M. (2018). *Investigating the perception and production of the Arabic pharyngealised sounds by L2 learners of Arabic* (Doctoral dissertation, University of Reading).
- Chisunum, J. I., & Nwadiokwu, C. (2024). Enhancing student engagement through practical production and utilisation of instructional materials in an educational technology class: A multifaceted approach. *NIU Journal of Educational Research*, 10(2), 81-89.
- Dagienė, V., Jasutė, E., & Dolgopolas, V. (2021). Professional development of in-service teachers: Use of eye tracking for language classes, case study. *Sustainability*, 13(22), 12504.
- Das, M. K. (2024). *Teacher education with ICT tools and techniques*. Academic Guru Publishing House.
- Harapan, M. A. M., Masriyah, M., & Suharyati, H. (2024). Improving Learning Outcomes of Kinesthetic Learners through a Differentiated Learning Approach. *International Journal of Sustainable Development & Future Society*, 2(2), 70-75.
- Howell, H. R., Salleh, M. N. M., Rosin, N., ZA, T., Maarif, M. A., & Adnan, M. A. M. (2025). Arabic language curriculum as a foundation for strengthening religious education in public higher education. *Jurnal Pendidikan Agama Islam*, 22(1), 97-121.
- Idoko, P. E. (2022). Islamic religious education textbooks in a pluralist Nigeria. *Religions*, 14(1), 42.
- Indra, M. H., Sutarto, S., Kharizmi, M., Nurmianti, A. S., & Susanto, A. (2023). Optimising the Potential of Technology-Based Learning Increases Student Engagement. *Al-Fikrah: Jurnal Manajemen Pendidikan*, 11(2), 233-244.

- Kamal, H. (2025). Teaching Arabic Today: Challenges, Strategies, and Opportunities in Islamic Higher Education. *International Journal of Learning, Teaching and Educational Research*, 24(10), 644-659.
- Katibi, S. I., & Jamiu, A. S. (2024). Enhancing Arabic Language Education in Ilorin West Local Government Area, Kwara State, Nigeria. *Fahima*, 3(2), 270-294.
- Lawrence, J. E., & Tar, U. A. (2018). Factors that influence teachers' adoption and integration of ICT in teaching/learning process. *Educational Media International*, 55(1), 79-105.
- Mahfud, C., Astari, R., Kasdi, A., Mu'ammam, M. A., Muyasaroh, M., & Wajdi, F. (2022). Islamic cultural and Arabic linguistic influence on the languages of Nusantara: From lexical borrowing to localised Islamic lifestyles. *Wacana, Journal of the Humanities of Indonesia*, 22(1), 11.
- Melliti, M., & Henchiri, M. (2024). Advancing autonomy in Tunisian higher education: Exploring the role of technology in empowering learners. *Educational Technology Quarterly*, 2024(4), 456-483.
- Muhammad, A. E. (2019). The 21st century learning as a knowledge age: The effects on teachers transforming teachers' knowledge in technology-rich environment in social studies education. *Journal of Critical Reviews*, 7(7), 2020.
- Odiagbe, S. A. (2012). *Industrial conflict in Nigerian universities: a case study of the disputes between the Academic Staff Union of Universities (ASUU) and the Federal Government of Nigeria (FGN)* (Doctoral dissertation, University of Glasgow).
- Olagbaju, O. O., & Popoola, A. G. (2020). Effects of audio-visual social media resources-supported instruction on learning outcomes in reading. *International Journal of Technology in Education*, 3(2), 92-104.
- Opeyemi, D. A., Ayodele, V., Alufa, O., Anderson, E., Strachan, R., & Emembolu, I. (2019, April). Barriers and identified solutions to the integration of digital technologies in the classroom: A case study of teachers in Nigeria. In *2019, IEEE Global Engineering Education Conference (EDUCON)* (pp. 953-958). IEEE.
- Oshowole, S. A. (2024). *Barriers Impacting the Integration of Classroom Technology in Primary Schools in Lagos, Nigeria* (Doctoral dissertation, Saint Leo University).
- Ros, T. J. (2024). Improving Critical Digital Pedagogy in the Virtual Classroom. *Online Journal for Workforce Education and Development*, 12(1).
- Saad, N. M. (2024). Digital Literacy Transformation in Madrasah Ibtidaiyah for Arabic Language Learning Through Adab and Tahfidz Programs with Technological Touch. *Al-Bidayah: Jurnal Pendidikan Dasar Islam*, 16(2), 281-308.
- Sain, Z. H., Thelma, C. C., & Sain, S. H. (2025). Tech-Driven Teaching: Analysing Academic Research on Educational Integration of Technology. *International Journal of Higher Education Management*, 11(1).
- Salam, S., Zeng, J., Pathan, Z. H., Latif, Z., & Shaheen, A. (2018). Impediments to the Integration of ICT in Public Schools of Contemporary Societies: A Review of Literature. *Journal of Information Processing Systems*, 14(1).
- Saleem, A., Kausar, H., & Deebe, F. (2021). Social constructivism: A new paradigm in teaching and learning environments. *Perennial journal of history*, 2(2), 403-421.
- Salehi, H., & Salehi, Z. (2012). Challenges for using ICT in education: teachers' insights. *International Journal of e-Education, e-Business, e-Management and e-Learning*, 2(1), 40.

- Sanni, A. (2020). *Problems of Arabic education in Nigeria*. Ilorin: Harmony Publishers.
- Sanni, A. M., & Masud, I. O. (2023). Beyond Religion: Promoting Arabic Language Education in Nigeria's Diverse Society. *MIMBAR PENDIDIKAN*, 8(1), 10-17.
- Shahi, D. K. (2025). ICT-Based Teaching-Learning Tools Used in ELT. *AMC Multidisciplinary Research Journal*, 4(1), 1-12.
- Siddiquah, A., & Salim, Z. (2017). The ICT facilities, skills, usage, and the problems faced by the students of higher education. *EURASIA Journal of Mathematics, Science and Technology Education*, 13(8), 4987-4994.
- Solahudeen, O. A. I., Oluwatosin, Y. I., Issa, B. N., & Babatunde, A. S. (2025). Attitude of Islamic Studies Students towards Learning Arabic Language in Secondary Schools in Asa Local Government, Kwara State. *NPRC Journal of Multidisciplinary Research*, 2(2), 197-210.