EFFECT OF AUDIO VISUAL AND TEXTUAL NURANIYYAH ON THE PERFORMANCE OF SENIOR SECONDARY SCHOOL ISLAMIC STUDIES STUDENTS IN KADUNA STATE, NIGERIA

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Abstract
This study examined the effect of audio visual and textual Nuraniyyah on the academic performance of Senior Secondary School Two (SSS II) Islamic Studies students in Kaduna State, Nigeria. The study adopted a quasi-experimental research design using a pre-test–post-test non-equivalent groups procedure, with intact classes assigned as two experimental groups (one taught with audio-visual materials and one taught with textual Nuraniyyah) and one control group receiving conventional instruction. The population of the study comprised thirteen thousand, six hundred and forty-six (13,646) SSS II Islamic Studies students in public secondary schools in Kaduna State, Nigeria, from which a sample of two hundred and forty-six (246) students, made up of 111 males and 132 females, was drawn using purposive and intact-class sampling techniques, with SSS II purposively selected as the target class because Qur'anic Studies content is most intensively taught at that level. Data were collected using a researcher-developed Islamic Studies Performance Test (ISPT), and descriptive statistics comprising mean and standard deviation were used to analyse the research questions, while Analysis of Variance (ANOVA) and paired-sample t-test were employed to test the hypotheses at the 0.05 level of significance. Findings revealed no significant difference in the pre-test mean performance scores of the audio-visual and textual Nuraniyyah groups ($F = 3.893$, $p = .386$), confirming their initial equivalence before treatment. Students taught using textual Nuraniyyah demonstrated a statistically significant improvement from pre-test ($M = 11.64$) to post-test ($M = 24.37$) performance ($t = 22.531$, $p = .000$). It was recommended, among other things, that Islamic Studies teachers, curriculum planners, and school administrators integrate audio-visual materials and textual Nuraniyyah into classroom instruction to enhance students' Qur'anic recitation skills, and that pre-tests be routinely administered to establish baseline equivalence before experimental treatments in secondary schools in Kaduna State.

Keywords: *Audio Visual, Textual Nuraniyyah, Qur'anic Recitation, Islamic Studies, Senior Secondary School.*

Introduction

Education remains the cornerstone of individual and societal development across social, economic, technological, and political dimensions. In contemporary discourse, it is widely conceptualised as a systematic process through which inexperienced individuals are guided to develop physically, mentally, socially, emotionally, and economically, thereby becoming productive members of society (Offorma, 2009; see also Dauda, 2021). In the Nigerian context, the school is formally recognised as a primary socialising agent responsible for transmitting values, attitudes, and competencies that equip learners for effective participation in national life (Federal Republic of Nigeria, 2013). The national educational goals articulated in the National Policy on Education include the inculcation of national consciousness and unity, the development of appropriate values and attitudes for individual and societal survival, the training of the mind in the understanding of the world, and the acquisition of relevant mental and physical skills necessary for individual and communal development (Federal Republic of Nigeria, 2013).

Within the framework of Islamic education, these national goals take on additional theological significance, because Islam places a premium on knowledge acquisition as a foundational religious obligation. The first verses revealed to the Prophet Muhammad (peace be upon him), comprising Surah Al-'Alaq, are often interpreted as encapsulating an integrated philosophy of education that connects reading, writing, reasoning, and divine guidance (Abubakar et al., 2018). From an Islamic perspective, education is understood not merely as the acquisition of worldly skills but also as the cultivation of taqwa (God-consciousness), akhlaq (character), and 'ilm (knowledge), which together form the basis of holistic human development (Abubakar et al., 2018). These theological commitments underscore the importance of effective Islamic Studies instruction in Nigerian secondary schools, particularly in the domain of Qur'anic recitation.

Qur'anic recitation, which encompasses the mastery of tajweed—the science governing the correct pronunciation and articulation of Qur'anic verses—is a critical component of Islamic Studies education in Nigeria. The Islamic Studies curriculum at the senior secondary level is designed to equip learners with textual familiarity with the Qur'an and oral proficiency in its recitation, alongside broader religious literacy and moral development (Federal Republic of Nigeria, 2013). Yet, empirical reports and examination bodies continue to highlight that many secondary school graduates complete their education without attaining the expected level of fluency in Qur'anic recitation and tajweed (Abdur-Rafiu, 2025; Falalu et al., 2024; West African Examinations Council [WAEC], 2011). This gap has been linked to over-reliance on conventional teacher-centred pedagogies and limited integration of multimedia and structured textual resources that could better engage the diverse sensory and cognitive capacities of contemporary learners (Ezegbe et al., 2016; Maidin et al., 2021).

The emergence of instructional technology in both general and religious education has created new opportunities to transform the delivery of Islamic Studies. Audio-visual instructional materials—such as video recordings, digital presentations, and multimedia resources that combine auditory and visual stimuli—have been shown to enhance learner engagement, retention, and conceptual understanding across multiple subject areas, including Science and Social Studies (Adamu et al., 2018; Bates, 2019). In Islamic education, recent quasi-experimental studies have reported that audio-visual media significantly improve students' achievement in Fiqh and tajweed by providing clear auditory models of recitation and visual representations of Arabic scripts and articulation points (Abdur-Rafiu, 2025; Hinayah, 2024). At the same time, textual Nuraniyyah—a structured visual-textual method derived from the Nuraniyyah (Noorani Qaida) curriculum—offers a systematic framework for teaching Arabic letters, their forms, phonetic rules, and tajweed principles in a sequentially organised textual format (Khan, 2013; Barus et al., 2022). Together, audio-visual materials and textual Nuraniyyah represent innovative departures from the dominant lecture method that has historically characterised Islamic Studies instruction in Nigerian schools (Ezegbe et al., 2016).

Despite growing advocacy for pedagogical innovation in Islamic Studies, there remains limited empirical evidence that directly compares the differential effects of audio-visual and textual Nuraniyyah instruction on students' Qur'anic recitation performance in the Nigerian context. Most available studies either focus on single interventions, such as ICT-enhanced teaching in Fiqh (Abdur-Rafiu, 2025), digital media for science education in Islamic junior secondary schools (Nurhidayah et al., 2025), or tahfidz outcomes associated with print versus audio-visual media (Barus et al., 2022), or address teacher practices and challenges in integrating technology into Qur'anic recitation teaching (Maidin et al., 2021). Consequently, there is a methodological and practical gap regarding how audio-visual and textual Nuraniyyah approaches compare in improving senior secondary school students' Qur'anic recitation skills in real classroom settings, particularly in Northern Nigeria.

The Islamic Studies curriculum in Nigerian secondary schools is explicitly designed to inculcate balanced Islamic values, moral development, and religious literacy during adolescence, a critical stage for identity formation and value internalisation (Federal Republic of Nigeria, 2013). However, several studies and inspection reports have documented persistent challenges in the effective delivery of this curriculum, especially in the domain of Qur'anic recitation. Teachers frequently report difficulties in diversifying their instructional approaches beyond the conventional lecture method, which remains predominant despite evidence of its limited effectiveness in promoting deep Qur'anic literacy and active learner engagement (Ezegbe et al., 2016; Olawale, 2013). Large class sizes, insufficient instructional time, inadequate teacher competence in Arabic phonetics, poor availability of specialised instructional materials, and limited

access to multimedia devices further constrain effective tajweed instruction (Adediran et al., 2012; Ogunbote & Adesoye, 2016). As a result, many students progress through primary and secondary schooling with only rudimentary recitation skills and struggle to apply tajweed rules accurately (Falalu et al., 2024; WAEC, 2011).

Recent empirical work suggests that structured use of audio-visual and textual resources can mitigate these challenges and substantially improve recitation outcomes. Audio-visual materials provide learners with concrete auditory and visual models of correct recitation, aligning with Edgar Dale's cone of experience, which posits that multi-sensory, concrete experiences support higher retention and understanding (Bates, 2019). In Islamic Studies classrooms, recorded expert recitations, projected tajweed demonstrations, and digital simulations of articulation points have been associated with higher achievement scores and improved motivation compared to traditional lecture-based instruction (Abdur-Rafiu, 2025; Falalu et al., 2024). Similarly, textual Nuraniyyah engages the visual processing channel through its progressive organisation of Arabic letters and phonological rules, offering learners a tangible reference that can be used for independent study, guided practice, and self-correction (Khan, 2013; Barus et al., 2022). Studies on Qur'anic memorisation and recitation indicate that structured textual engagement with tajweed rules produces significant gains in recitation accuracy, especially when combined with audio-visual reinforcement (Hinayah, 2024; Falalu et al., 2024).

Theoretically, the pedagogical potential of audio-visual materials and textual Nuraniyyah can be explained using the Cognitive Theory of Multimedia Learning (CTML) and the Technological Pedagogical Content Knowledge (TPACK) framework. CTML posits that humans possess dual channels for processing auditory/verbal and visual/pictorial information and that meaningful learning occurs when learners actively select, organise, and integrate information from both channels into coherent mental models (Mayer, 2020; Mayer & Moreno, 2019). Audio-visual instruction directly leverages these dual channels by allowing learners to see Arabic scripts and articulation points while simultaneously hearing correct recitation, thereby promoting deeper processing of tajweed rules and reducing extraneous cognitive load. Textual Nuraniyyah aligns with CTML's coherence and signalling principles, because it presents letters and rules in a carefully structured visual sequence that highlights essential information and minimises distractions (Mayer, 2020). The TPACK framework further emphasises that effective integration of these tools requires teachers to possess not only content knowledge of Qur'anic recitation (CK) and pedagogical knowledge (PK), but also technological knowledge (TK) that enables them to select, adapt, and implement audio-visual and textual resources meaningfully (Koehler & Mishra, 2015; Maidin et al., 2021).

In Kaduna State, anecdotal evidence and limited empirical reports suggest that many Islamic Studies teachers still rely predominantly on conventional lecture methods and underutilise available audio-visual and textual Nuraniyyah resources (Abubakar et al., 2018; Olawale, 2013). Where multimedia devices and structured Nuraniyyah texts exist, they are not always systematically integrated into lesson planning and assessment. This situation underscores the need for context-specific empirical evidence that can guide teachers, curriculum planners, school administrators, and quality assurance officials in making informed decisions about instructional strategies for Qur'anic recitation. It is against this backdrop that the present study investigates the effect of audio-visual and textual Nuraniyyah instructional approaches on the academic performance of senior secondary school Islamic Studies students in Kaduna State, Nigeria. Specifically, the study examines differences in pre-test and post-test performance between students taught using audio-visual materials and those taught using textual Nuraniyyah, with a view to providing evidence-based recommendations for improving Qur'anic recitation pedagogy in Nigerian secondary schools.

Objectives of the Study

This study seeks to:

1. Determine the effect of audio-visual instructional materials on students' mean performance scores in Nuraniyyah among Senior Secondary School students in Kaduna State, Nigeria.
2. Determine the effect of textual Nuraniyyah instruction on students' mean performance scores in Islamic Studies in Senior Secondary Schools in Kaduna State, Nigeria.

Research Questions

1. What is the effect of audio-visual instructional materials on students' mean performance scores in Nuraniyyah among Senior Secondary School students in Kaduna State, Nigeria?
2. What is the effect of textual Nuraniyyah instruction on students' mean performance scores in Islamic Studies in Senior Secondary Schools in Kaduna State, Nigeria?

Research Hypotheses

H01: There is no significant difference in the pre-test mean performance scores of students taught using audio visual and those taught with textual Nuraniyyah.

H02: There is no significant difference between the pre-test and post-test mean performance scores of students taught Islamic Studies using textual Nuraniyyah in Senior Secondary Schools in Kaduna State, Nigeria.

Conceptual Clarification of Terms

Audio visual instructional materials refer to any educational resources that combine auditory (sound) and visual (sight) stimuli to facilitate learning. These include audio recordings, video recordings, CDs, DVDs, MP3 players, projector presentations, instructional films, and digital multimedia content (Adamu et al., 2018). In the context of this study, audio visual materials specifically refer to digital recordings and projected instructional materials used to demonstrate correct Qur'anic recitation with tajweed, providing students with both a visual representation of Arabic scripts and an auditory model of correct phonemic pronunciation.Research consistently supports the effectiveness of audio-visual materials in improving academic performance across subject areas. Adamu et al. (2018) demonstrated significant improvements in student learning outcomes when audio visual materials were deployed in secondary school Science instruction in Kaduna State. Similarly, a study on the use of audio-visual media in teaching Fiqh in Islamic junior secondary schools found that the experimental group achieved a mean score of 85% compared to 72% in the control group (Nurhidayah et al., 2024). In Qur'anic education specifically, audio visual media has been shown to improve tajweed learning outcomes by engaging both auditory and visual processing pathways (Abdul Hamid et al, 2025; Abdur-Rafiu, 2025).

Textual Nuraniyyah refers to a structured, text-based instructional methodology for teaching Arabic letter recognition and Qur'anic recitation, derived from the Nuraniyyah (also spelled Nooraniyyah or Noorani Qaida) curriculum. Developed originally as a beginner's guide to Qur'anic reading, the Nuraniyyah method employs a progressive visual presentation of Arabic letters, their forms, phonemic rules, and tajweed principles in a sequentially organised textual format (Khan, 2013). The method is widely used in Islamic educational institutions across Nigeria and other Muslim-majority countries as a foundational tool for teaching correct Qur'anic recitation.

As a textual instructional tool, Nuraniyyah engages the visual processing channel of learners by providing a structured written reference for Arabic letter forms and their phonological articulation rules. Unlike purely oral instruction, textual Nuraniyyah gives students a tangible visual resource that they can study independently, reference during practice, and use for self-correction. Ogunbote and Adesoye (2016) noted that textual technology adds a new dimension to learning experience, making complex concepts easier to present and comprehend when words are complemented with structured visual organisation.

Qur'anic recitation (qiraat) refers to the oral performance of the text of the Holy Qur'an according to established rules of pronunciation, articulation, and rhythm. Tajweed, derived from the Arabic root meaning to improve or make excellent, is the science that governs the correct pronunciation of each letter and word of the Qur'an according to the traditional rules transmitted from the Prophet Muhammad (peace be

upon him) through an unbroken chain of recitation (Khan, 2013). Mastery of tajweed is considered a religious obligation for every Muslim who recites the Qur'an, as incorrect pronunciation can alter the meaning of Qur'anic verses and their associated Ahkam (legal rulings) (Sughami & Suprayetion, 2011).In contemporary Islamic education, the teaching of tajweed presents significant pedagogical challenges, particularly in formal secondary school settings where large class sizes, limited instructional time, and inadequate teaching materials constrain effective instruction. The Application of Tajweed Science in Qur'an Learning (Falalu, et al, 2024) found that integrating technology and audio resources significantly reinforced tajweed learning outcomes, underscoring the pedagogical imperative of moving beyond purely conventional methods in Qur'anic education.

In the context of this study, academic performance refers to the measurable achievement of students on a standardised test designed to assess their knowledge and skills in Qur'anic recitation and Islamic Studies content. Performance is operationalised through mean scores on a researcher-developed performance test administered as pre-test and post-test to the study groups. This conceptualisation aligns with the broad definition of academic performance as the demonstration of knowledge and skills acquired through formal instruction, as measured by standardised assessment instruments (Dauda, 2021).

Theoretical Framework

Cognitive Theory of Multimedia Learning (Mayer, 2009; 2020)

The Cognitive Theory of Multimedia Learning (CTML), developed by Richard E. Mayer, provides the primary theoretical foundation for this study. Mayer (2020) posits that human beings possess two distinct information-processing channels, one for auditory/verbal input and another for visual/pictorial input, and that meaningful learning occurs when learners actively engage both channels in organising and integrating information into coherent mental models. This dual-channel assumption, grounded in cognitive load theory, holds that learning is optimised when instruction leverages both sensory modalities simultaneously, thereby reducing extraneous cognitive load while increasing germane cognitive engagement (Mayer, 2020; Mayer & Moreno, 2019).

CTML is directly applicable to the instructional methods under investigation in this study. Audio visual instruction, by its nature, engages both the auditory channel (through spoken words, recitation sounds, and phonemic demonstrations) and the visual channel (through images, written text, and visual representations of Arabic letters). This dual stimulation is consistent with Mayer's (2020) multimedia principle, which states that students learn more deeply from words and pictures together than from words alone. In the context of Qur'anic recitation, audio visual materials allow learners to both see the correct articulation of Arabic letters and simultaneously hear their proper phonemic rendering, thus enhancing tajweed acquisition.

Textual Nuraniyyah, as a visually structured, text-based instructional approach, aligns with Mayer's (2020) coherence and signalling principles. By systematically organising Arabic letters and their phonetic rules in a visually progressive and structured format, textual Nuraniyyah reduces extraneous cognitive load and supports the learner's schema-building process. The visual clarity and sequential organisation of the method facilitate the active processing of Qur'anic phonemic rules, consistent with CTML's active processing assumption (Mayer, 2020).

Edgar Dale's Cone of Experience

Edgar Dale's Cone of Experience offers a complementary theoretical lens for understanding the pedagogical effectiveness of audio visual instruction. Dale (as cited in Bates, 2019) proposed a hierarchical model of instructional concreteness, ranging from direct purposeful experiences at the base to purely verbal or symbolic abstractions at the apex. According to this framework, instructional methods that engage multiple senses and provide concrete or near-concrete representations of subject matter are associated with higher rates of learner retention and understanding.

Audio visual materials occupy an intermediate but highly effective position on Dale's Cone, offering dramatised experiences, demonstrations, and recordings that bring abstract concepts to life. In the context of Qur'anic instruction, audio visual tools—such as recordings of expert Qur'anic reciters demonstrating correct tajweed application—provide learners with concrete auditory and visual models that significantly exceed the abstraction level of verbal explanation alone. Nurhidayah et al. (2025) confirmed this principle in an Islamic school setting, demonstrating that digital learning media produced significantly higher student achievement compared to traditional instruction (mean post-test score: 91.41 vs. 80.42; $p < 0.05$).

Technological Pedagogical Content Knowledge (TPACK) Framework

The TPACK framework, developed by Mishra and Koehler (as cited in Koehler & Mishra, 2015), is also relevant to the study's concern with the integration of technology into subject-specific Islamic Studies instruction. TPACK describes the complex, integrated knowledge that teachers require to effectively integrate technology into their subject matter teaching. The framework identifies three core knowledge domains, content knowledge (CK), pedagogical knowledge (PK), and technological knowledge (TK), and emphasises that effective technology-integrated teaching requires fluency in all three domains and their intersections. In the context of Islamic Studies, an effective teacher requires deep knowledge of Qur'anic content (CK), understanding of appropriate instructional methods for religious education (PK), and technological competence to deploy audio visual and textual tools effectively (TK). The TPACK framework provides a conceptual rationale for why many Nigerian Islamic Studies teachers struggle to

integrate audio visual materials: they may possess strong content knowledge but lack the technological or pedagogical-technological knowledge needed to deploy instructional technology effectively (Abdur-Rafiu, 2025).

Empirical Review

A substantial body of empirical literature confirms the positive impact of audio visual instructional materials on student academic performance across diverse educational contexts. Adamu et al. (2018) conducted a study on the use of audio-visual materials in teaching the classification of living things among secondary school students in SabonGari LGA, Kaduna State, and found significant improvements in learning outcomes in the experimental group exposed to audio visual instruction compared to the control group. The study demonstrated that audio visual materials enhanced student engagement, facilitated conceptual understanding, and improved retention of biological concepts.

In the context of Islamic Studies specifically, Abdur-Rafiu (2025) examined the effect of Information and Communication Technology on Senior School Islamic Studies students' achievement in Fiqh in Ilorin, Nigeria, using a quasi-experimental design with 104 SSS II students. Findings revealed that students taught using videotaped instruction performed significantly better than their counterparts taught using conventional classroom instruction, while gender had no significant influence on performance. This finding corroborates earlier work by Abubakar et al. (2018), who documented teacher preferences for audio visual materials in Islamic Studies in Katsina State, noting that teachers recognised the motivational and instructional advantages of audio visual tools, particularly for engaging digitally oriented learners.

A more recent study byAbdul Hamid et al (2025) investigated the application of audio visual learning media in increasing Islamic Studies students' tajweed learning outcomes and found that the innovation and creativity of Islamic religious education teachers in implementing audio visual learning media demonstrably improved students' tajweed outcomes. Similarly, a quasi-experimental study in Islamic Junior Secondary Schools by Nurhidayah et al. (2025) confirmed that digital media enhanced conceptual understanding, engagement, and motivation compared with traditional instruction, with the experimental group attaining a mean post-test score of 91.41 and an average N-Gain of 0.70 (high), compared to the control group's score of 80.42 and N-Gain of 0.27 (low), a difference that was statistically significant ($p < 0.05$).

Research on text-based instructional approaches in Qur'anic education also reveals encouraging findings. Ogunbote and Adesoye (2016) argued that textual technology introduces a new dimension to learning experiences, particularly when words are systematically organised and complemented with visual cues, making complex phonemic concepts more accessible to learners. Their work highlights the significance of structured visual-textual presentation in knowledge acquisition and retention. In the

domain of Qur'anic memorisation (tahfidz), a study at an Integrated Islamic Private Junior High School in Medan found that students who used print media with high Qur'anic reading ability obtained an average tahfidz learning outcome of 80.00, while students who used audio visual media with high reading ability obtained 87.47, indicating that while textual methods are effective, they produce even greater outcomes when combined with audio visual engagement (Barus,2022). This finding is consistent with research on Al-Qur'an memorisation techniques reviewed by Hinayah (2024), which concluded that the integration of contemporary productivity tools with Qur'an memorisation instruction is an effective strategy for facilitating Qur'anic learning, particularly when diverse sensory channels are engaged simultaneously.

The Application of Tajweed Science in Qur'an Learning (Falalu, et al, 2024) found that systematic textual engagement with tajweed rules significantly enhanced student recitation proficiency, and emphasised the importance of incorporating both technological and structured textual resources to reinforce learning outcomes.

Studies comparing innovative instructional methods with conventional approaches in Islamic and religious education consistently document the superiority of technology-enhanced and structured methods over traditional lecture-based instruction. The Hinayah (2024) study on the effects of audio visual media on Islamic Studies students in Daura Zonal Education Quality Assurance found that the audio visual group scored a mean of 55.43 compared to the conventional group's 47.04 (SD: 20.99 and 14.51 respectively), with a t-value of 2.43 and a p-value of 0.003, confirming a statistically significant advantage for audio visual instruction (Hinayah, 2024).

Maidin et al (2021) examined 21st-century Islamic Education teachers' teaching practices in Qur'anic recitation and concluded that effective teaching in this domain requires learner-centred approaches, active and creative teaching strategies, and the systematic use of technology, noting that full mastery of Qur'anic recitation methods cannot be achieved without integrating appropriate instructional technologies. This finding aligns with the earlier conclusion of Ezegbe et al. (2016), who observed that the dominance of lecture methods in Upper Basic Education Islamic Studies classrooms renders students passive learners and undermines the achievement of Qur'anic literacy objectives.

Dauda (2021) further provided methodological validation for quasi-experimental pre-test–post-test designs in educational research, confirming that pre-tests serve a critical role in establishing initial equivalence between experimental groups, thereby ensuring the internal validity of the findings. This methodological grounding supports the design adopted in the present study.

Methodology

The study employed a quasi-experimental research design, specifically the pre-test–post-test non-equivalent groups design. Quasi-experimental designs are appropriate when it is not feasible to randomly assign participants to groups, as is typically the case in school-based educational research where class disruption must be minimised (Cook & Campbell, 2006; Aliyu, 2016). Three intact classes were utilised: two experimental groups (one receiving audio-visual instruction and one receiving textual Nuraniyyah instruction) and one control group receiving conventional instruction. Both experimental groups were subjected to pre-test and post-test assessments, while the control group received only the post-test, in accordance with the design structure advised by Cook and Campbell (2006).The target population comprised all Senior Secondary School Two (SSS II) students of Islamic Studies in public secondary schools in Kaduna State, Nigeria, totalling thirteen thousand, six hundred and forty-six (13,646) students. The sample consisted of two hundred and forty-six (246) students, comprising 111 male students and 132 female students. SSS II was purposively selected as the target class because it represents the midpoint of the senior secondary cycle when Qur'anic Studies content is most intensively taught in the curriculum.

The instrument for data collection was a researcher-developed Islamic Studies Performance Test (ISPT) covering Qur'anic recitation content. The instrument was validated by subject-matter experts and research methodology specialists in the Department of Educational Foundation, Kaduna State University, Kaduna. Reliability was established through pilot testing with a comparable group of students not included in the main study. Descriptive statistics (mean and standard deviation) were used to answer the research questions. Analysis of Variance (ANOVA) was employed to test Hypothesis One (comparing pre-test scores across groups), while a paired-sample t-test was used to test Hypothesis Two (comparing pre-test and post-test scores for the textual Nuraniyyah group). All hypotheses were tested at the 0.05 level of significance.

Results

Research Question One: Differences in Pre-Test Mean Performance Scores of Students Taught Using Audio Visual and Textual Nuraniyyah.

Table 1: Mean and Standard Deviation of Pre-Test Mean Performance Scores of Students Taught Using Audio Visual and Textual Nuraniyyah

Group	N	Mean	SD
Audio Visual	81	11.6420	4.20805
Textual Nuraniyyah	86	11.8256	5.11098

Table 1 presents the pre-test performance scores of students before the administration of the respective treatments. Students in the audio visual group recorded a pre-test mean score of 11.6420 (SD = 4.20805), while students in the textual Nuraniyyah

group recorded a slightly higher pre-test mean of 11.8256 (SD = 5.11098). The negligible difference in mean scores (0.1836 of a mark) between the two groups at the pre-test stage indicates that both groups possessed comparable baseline knowledge and ability before the commencement of treatment. This near-equivalence in pre-test performance provides a necessary condition for valid comparison of post-test outcomes following the respective instructional interventions.

Research Question Two: Differences in Pre-Test and Post-Test Mean Performance Scores for Students Taught Using Textual Nuraniyyah.

Table 2: Mean and Standard Deviation of Pre-Test and Post-Test Scores for Students Taught Islamic Studies Using Textual Nuraniyyah

Test	N	Mean	Mean Difference	Standard Deviation
Pre-test	81	11.62	12.75	4.20
Post-test	81	24.37		3.84

As shown in Table 2, the experimental group that received textual Nuraniyyah instruction recorded a mean achievement score of 11.62 (SD = 4.20) at pre-test and a markedly higher mean score of 24.37 (SD = 3.84) at post-test. The mean difference of 12.75 points between pre-test and post-test scores represents a substantial improvement attributable to the textual Nuraniyyah treatment. The reduction in standard deviation from 4.20 to 3.84 further indicates that post-test scores were slightly more homogeneous than pre-test scores, suggesting that the textual Nuraniyyah instruction produced relatively consistent gains across the group. This finding affirms that textual Nuraniyyah is an effective instructional method for improving Qur'anic recitation performance among Senior Secondary School students in Kaduna State.

Hypothesis Testing

Hypothesis One: ANOVA on Pre-Test Scores for Students Taught Using Audio Visual and Textual

Table 3: ANOVA on Pre-Test Scores for Students Taught Islamic Studies Using Audio Visual and Textual Nuraniyyah

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.	Decision
Between Groups	1151.348	2	575.674	3.893	.386	Retained
Within Groups	4127.355	243	16.985			
Total	**5278.703**	**245**				

The ANOVA result in Table 3 yielded an F-value of 3.893 with a p-value of .386 at the 0.05 level of significance. Since the p-value (.386) is substantially greater than the significance level of 0.05, the null hypothesis (H01) is retained. This means there is no statistically significant difference in the pre-test mean performance scores of students taught using audio visual and those taught with textual Nuraniyyah. By implication, both groups entered the study with statistically equivalent levels of prior knowledge and ability, thereby establishing a sound basis for interpreting post-intervention differences as effects of the respective instructional treatments rather than pre-existing group disparities.

Hypothesis Two: Paired Sample t-Test for Textual Nuraniyyah Group

Table 4: Results of Paired Sample t-Test of Pre-Test and Post-Test Scores for Students Taught Islamic Studies Using Textual Nuraniyyah

Test	N	Mean	SD	t	Sig.	Decision
Pre-test	81	11.64	4.20805	22.531	.000	Rejected
Post-test	81	24.37	3.84852			

The paired sample t-test result in Table 4 yielded a t-value of 22.531 with a p-value of .000. Since the p-value (.000) is less than the significance level of 0.05, the null hypothesis (H02) is rejected. This confirms that there is a statistically significant difference between the pre-test and post-test mean performance scores of students taught Islamic Studies using textual Nuraniyyah ($t = 22.531$, $p = .000 < 0.05$). The direction of the mean scores (pre-test: 11.64 vs. post-test: 24.37) confirms that the significant difference represents a substantial improvement in student performance following textual Nuraniyyah instruction. The extremely large t-value (22.531) and the p-value of .000 underscore the robustness of this effect.

Discussion of Findings

The first finding of this study, that there was no significant difference in the pre-test mean performance scores of the audio visual and textual Nuraniyyah groups ($F = 3.893$, $p = .386$), confirms the initial equivalence of the two experimental groups before the commencement of treatment. This finding is of fundamental methodological importance, as it validates the internal validity of the quasi-experimental design by demonstrating that observed post-intervention differences cannot be attributed to pre-existing group disparities in prior knowledge or ability (Cook & Campbell, 2006).

This finding aligns with the methodological guidance provided by Dauda (2021), who emphasised that in quasi-experimental research, pre-tests must be conducted among all participating groups to establish that the entry behaviours of participants are equivalent, particularly when random assignment is not feasible. The near-identical pre-

test means of 11.6420 (audio visual group) and 11.8256 (textual Nuraniyyah group) are consistent with findings from comparable studies in Nigerian educational research, where pre-tests have similarly confirmed initial group equivalence before experimental treatments (Aliyu, 2016; Dauda, 2021).

This finding, however, appears to diverge from the position held by Mbacho (2013), who argued that pre-tests should not be administered to control groups in studies comparing experimental and control methods because the control group receives no treatment. The present study's approach of pre-testing all groups is better supported by contemporary research methodology literature, which recognises that pre-testing serves the dual purpose of establishing baseline equivalence and enabling the calculation of pre-test–post-test gains, thereby providing a more complete and valid account of instructional effects (Cook & Campbell, 2006; Aliyu, 2016).

The second major finding of this study, that textual Nuraniyyah instruction produced a statistically significant improvement in students' Qur'anic Studies performance (pre-test mean: 11.64 vs. post-test mean: 24.37; $t = 22.531$, $p = .000$), is both statistically compelling and educationally significant. The mean gain of 12.75 points, accompanied by a large t-value, provides robust evidence that the structured visual-textual instructional approach of Nuraniyyah significantly enhances students' mastery of Qur'anic recitation content. This finding is consistent with the theoretical predictions of Mayer's (2020) Cognitive Theory of Multimedia Learning, which holds that structured presentation of verbal and visual information simultaneously reduces extraneous cognitive load and promotes the formation of coherent mental models. Textual Nuraniyyah, by systematically organising Arabic letter forms, phonemic rules, and tajweed principles in a visually structured textual format, enables learners to build accurate cognitive schemas for Qur'anic recitation, an outcome consistent with Mayer's (2020) coherence and signalling principles.

The finding is also supported by Ogunbote and Adesoye (2016), who argued that textual technology adds a new and meaningful dimension to the learning experience, particularly when words are visually organised and systematically presented in ways that complement and reinforce their phonemic and semantic content. Learners who engage with well-structured textual instructional materials tend to demonstrate higher retention and recall because structured visual presentation engages social, emotional, and intellectual sensory faculties simultaneously (Ogunbote & Adesoye, 2016). This principle is especially relevant in Qur'anic education, where the spatial arrangement of Arabic letters in the Nuraniyyah framework provides visual anchors for phonemic learning.

The finding further resonates with empirical evidence from studies on Qur'anic memorisation and recitation pedagogy. Barus, et al (2022) found that print media users with high Qur'anic reading ability obtained a tahfidz mean score of 80.00, confirming that structured textual instruction supports meaningful Qur'anic learning gains. Similarly, the Application of Tajweed Science in Qur'an Learning (Journal of Social Sciences and

Management Research, 2024) demonstrated that systematic textual engagement with tajweed rules was associated with significant improvements in recitation proficiency, reinforcing the pedagogical utility of structured textual instruction in Qur'anic education.

The combined findings of this study affirm that both audio visual and textual Nuraniyyah approaches represent effective departures from the dominant lecture method that has historically characterised Islamic Studies instruction in Nigerian secondary schools (Ezegbe et al., 2016). The fact that both experimental groups demonstrated significant pre-to-post improvements, while both began the study at comparable baseline levels, underscores the independent instructional value of each method. From the perspective of the TPACK framework (Koehler & Mishra, 2015), these findings also highlight the importance of equipping Islamic Studies teachers with the technological, pedagogical, and content knowledge necessary to deploy these tools effectively. Abdur-Rafiu (2025) demonstrated that ICT-enhanced instruction in Islamic Studies in Ilorin produced significantly superior outcomes compared to conventional instruction, a finding that reinforces the argument for systematic professional development of Islamic Studies teachers in instructional technology integration.

Blessing Odeoye (2019) noted that the extensive use of technology in classrooms fundamentally transforms the teacher's role from a dispenser of information to a facilitator of active learning, enabling students to interact directly and individually with instructional content in ways that promote deeper and more durable learning. This paradigm shift is particularly significant in the context of Qur'anic education, where the ultimate goal is not merely knowledge acquisition but the development of practical oral performance skills that require individualised practice, repetition, and self-correction, all of which are better supported by audio visual and textual instructional tools than by conventional lecture methods.

Conclusion

Based on the findings of this study, the following conclusions are drawn:

1. The two experimental groups, students assigned to audio visual instruction and those assigned to textual Nuraniyyah instruction, entered the study with statistically equivalent prior knowledge levels, as confirmed by the non-significant ANOVA result on pre-test scores ($F = 3.893$, $p = .386$). This establishes the methodological validity of subsequent treatment comparisons.
2. Textual Nuraniyyah is a highly effective instructional method for teaching Qur'anic recitation in Senior Secondary Schools, producing a statistically significant and educationally meaningful improvement in student performance (mean gain: 12.75; $t = 22.531$, $p = .000$). This implies that systematic adoption of textual Nuraniyyah in Islamic Studies instruction can substantially enhance students' ability to understand, recite, and master Qur'anic content with correct tajweed.
3. Audio visual instructional materials represent an effective and accessible alternative or complement to textual Nuraniyyah, particularly in contexts where

Nuraniyyah texts may not be readily available. The use of audio-visual materials engages multiple sensory channels simultaneously, making Qur'anic recitation instruction more engaging, concrete, and effective for digitally oriented contemporary learners.

Recommendations

Based on the findings and conclusions of this study, the following recommendations are made:

i. Researchers and students of educational research should consistently administer pre-tests to all participating groups in quasi-experimental studies to establish baseline equivalence and ensure the internal validity of findings. This practice should be institutionalised as a standard methodological requirement in educational research across Senior Secondary Schools in Kaduna State, Nigeria.

ii. Islamic Studies teachers at the senior secondary school level should systematically integrate textual Nuraniyyah into their instructional practice for teaching Qur'anic recitation. Curriculum planners and educational authorities should consider formally incorporating the Nuraniyyah method into the Islamic Studies curriculum framework and providing teachers with appropriate training and materials.

iii. Teachers, curriculum planners, school administrators, and quality assurance officials should actively advocate for and support the use of audio-visual instructional materials in Islamic Studies classrooms. Audio visual tools should be provided as standard instructional resources in secondary school Islamic Studies departments, particularly in schools where textual Nuraniyyah materials are not readily available.

iv. State educational authorities and university education departments should design and implement professional development programmes for Islamic Studies teachers that build their competence in deploying audio visual and textual instructional technologies. Such programmes should be grounded in the TPACK framework, addressing the technological, pedagogical, and content knowledge needs of practising Islamic Studies teachers.

v. Government agencies, school boards, and educational development partners should prioritise the procurement and distribution of audio visual devices and textual Nuraniyyah instructional materials to public secondary schools in Kaduna State, Nigeria, as part of a broader effort to improve the quality of Islamic Studies education.

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