

The Evaluation of the Use of Multimedia-Based Media in Improving the Process of Learning Religious Studies in Secondary Schools in Southwestern Nigeria

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ABSTRACT

This study evaluates the Comparative analysis of effectiveness of multimedia-based instructional media and Conventional Instructional Strategy in enhancing the teaching and learning of Religious Studies in secondary schools across South-western Nigeria. Descriptive survey design was adopted for this study, the population for the study comprised secondary school students in Religious Studies education in Southwestern Nigeria. A mixed-methods of qualitative and quantitative design was employed, involving 240 students and 60 Religious Studies teachers selected from Lagos, Ogun, Ondo, Oyo, and Osun and Kwara States. Using Simple random sampling. Data were collected through questionnaires, classroom observations, and semi-structured interviews. The instruments were validated by experts in Test and measurement with reliability co-efficient of 0.74 and 0.80 respectively. Two instruments will be used to collect data for the study, namely; a. Student' Christian Religious Studies Performance Test (SCRSPT) and b. Students Attitude towards Christian Religious Studies Scale (SACRSS). a. The SCRSPT will be divided into two sections. Section A will contain the students' personal information such as: name of students, name of school, class and sex while section B contained the multiple-choice questions. Data collected were analyzed using of Descriptive and inferential Statistics.

Keywords: Education, Evaluation, Multimedia-Based- Media, Conventional Teaching and Learning Religion Studies.

INTRODUCTION

Religious Studies is a core component of the Nigerian secondary school curriculum, designed to promote moral development, ethical reasoning, and cultural understanding (Federal Ministry of Education, 2013). Christian Religious Studies (CRS) is the systematic exploration of the Christian faith as delineated in the New Testament and Old Testament of the Christian Holy Bible. This field of study is offered at primary, secondary, and tertiary educational institutions in Nigeria (Baiyeri, 2012; Baiyeri, 2013; Baiyeri, 2015; Baiyeri, 2016).

Despite its importance, the subject is often taught using Conventional pedagogical approaches dominated by rote learning and teacher-centred instruction. These methods may not effectively engage contemporary learners who are increasingly exposed to digital technologies. Multimedia-based instructional media such as videos, animations, audio recordings, and interactive presentations offer opportunities to enhance comprehension and participation. Despite increasing ICT adoption in Southwestern Nigeria, empirical evidence on the effectiveness of multimedia in Religious Studies instruction remains limited. This study evaluates the extent of multimedia use, its impact on student learning, and the challenges faced by teachers in integrating multimedia tools.

Conventional, teaching and learning in many educational systems, including Nigeria, have been largely dominated by teacher-centred approaches where teachers serve as the primary sources of knowledge while students assume passive roles as recipients of information. However, developments in educational theory and technology have encouraged a shift towards student-centred approaches that promote active participation, collaboration, critical thinking, creativity, and independent learning. Computer Based Multimedia learning has

become a significant component of this transformation because it provides opportunities for learners to access information beyond the physical boundaries of the classroom. (Ajibade & Obadiora 2001)

Education plays a fundamental role in the social, moral, intellectual, and economic development of every nation. In Nigeria, Religious Studies is one of the core subjects taught at the secondary school level with the aim of promoting moral values, ethical behaviour, religious tolerance, and character development among students. The subject equips learners with knowledge of religious beliefs, values, and practices that contribute to peaceful coexistence and responsible citizenship. However, the achievement of these objectives depends largely on the instructional methods and learning resources employed by teachers.

The rapid advancement of Information and Communication Technology (ICT) has transformed teaching and learning processes across the world. One of the most significant innovations in education is the use of multimedia-based instructional media, which combines text, graphics, audio, animation, video, and interactive content to facilitate learning. Multimedia-based instruction creates a learner-centred environment that enhances students' participation, understanding, motivation, and retention of knowledge compared to conventional lecture methods.

Despite the recognized benefits of multimedia technology, the teaching of Religious Studies in many Nigerian secondary schools continues to rely heavily on conventional teaching approaches. These methods often limit students' active participation, reduce classroom interaction, and make learning less engaging. Consequently, students may develop low interest in the subject, resulting in poor academic performance and limited appreciation of religious values.

In Southwestern Nigeria, efforts have been made by governments and educational stakeholders to improve ICT integration in schools through the provision of computers, internet facilities, projectors, and digital learning resources. However, the extent to which these multimedia resources are available, accessible, and effectively utilized in the teaching of Religious Studies remains uncertain. Challenges such as inadequate infrastructure, insufficient teacher training, poor electricity supply, and limited funding continue to hinder the effective integration of multimedia technologies into classroom instruction.

Although previous studies have examined multimedia-based instruction in subjects such as Science, Mathematics, and English Language, relatively few have focused specifically on Religious Studies in secondary schools within Southwestern Nigeria. This study therefore seeks to evaluate the use of multimedia-based media in improving the process of learning Religious Studies in secondary schools in Southwestern Nigeria and provide evidence that can guide educational policy and classroom practice.

Statement of the Problem

The teaching and learning of Religious Studies in Nigerian secondary schools are expected to promote students' moral values, critical thinking, and understanding of religious principles. However, the achievement of these objectives has been hindered by the continued reliance on conventional teacher-centred instructional methods, which often make lessons monotonous and reduce students' interest, participation, and academic performance. In many secondary schools across Southwestern Nigeria, Religious Studies is still predominantly taught through lectures and rote memorization, with limited integration of multimedia-based instructional media such as videos, animations, interactive presentations, audio recordings, and computer-assisted learning resources.

The rapid advancement of information and communication technology (ICT) has transformed educational practices worldwide, demonstrating that multimedia-based instruction can enhance students' motivation, improve understanding of abstract concepts, encourage active participation, and promote better retention of learning. Despite these potential benefits, the adoption and effective utilization of multimedia-based media in the teaching of Religious Studies remain limited in many secondary schools due to factors such as inadequate ICT facilities, insufficient teacher competence in multimedia application, unreliable electricity supply, and inadequate funding.

Although several studies have examined the use of multimedia in teaching science, mathematics, and language subjects, relatively few have focused specifically on Religious Studies, particularly within the context of secondary schools in Southwestern Nigeria. This creates a gap in empirical knowledge regarding the extent to which multimedia-based media (video conferencing and Computer base) influence the teaching and learning process of Religious Studies in the region.

Types of Multimedia Used in Teaching Religious Studies

Usage patterns describe how different multimedia tools and resources are applied to make teaching more effective, interactive, and engaging. Common types include:

YouTube Videos

Used to demonstrate concepts through educational videos, documentaries, tutorials, and recorded lectures. They help learners visualize ideas and understand difficult topics more easily.

PowerPoint Presentations

Used to organize lessons with computer, text, images, charts, animations, and videos. PowerPoint helps teachers present information in a clear, structured, and visually appealing way.

Religious Apps

Applications such as Bible apps, Quran apps, hymn apps, or other faith-based learning platforms are used to access scriptures, devotionals, commentaries, quizzes, and teaching materials. They support interactive learning and encourage personal study.

Audio Recordings

Include podcasts, recorded sermons, lectures, and music. These are useful for listening practice, revision, and learning outside the classroom.

Images and Photographs

Used to illustrate concepts, historical events, scientific processes, or religious stories, making lessons more interesting and easier to understand.

Animations

Help explain complex ideas, processes, or events through moving graphics, making abstract concepts easier to grasp.

Interactive Whiteboards

Allow teachers and students to write, draw, display multimedia content, and interact with digital lessons in real time.

Educational Websites

Websites provide articles, videos, quizzes, simulations, and other learning resources that enrich classroom instruction and support independent study.

Video Conferencing Tools

Platforms such as Zoom, Google Meet, or Microsoft Teams are used for online teaching, virtual discussions, and remote learning.

Social Media Platforms

Platforms like WhatsApp, Facebook, or Telegram are used to share learning materials, announcements, videos, assignments, and facilitate communication between teachers and learners.

E-books and Digital Documents

Electronic textbooks, PDFs, and study guides provide learners with easy access to reading materials anytime and anywhere.

Educational Games and Quizzes

Interactive games and quiz platforms make learning enjoyable while helping teachers assess students' understanding and reinforce lesson content.

The use of Digital, multimedia such as YouTube videos, PowerPoint presentations, religious apps, audio recordings, images, animations, educational websites, and interactive learning tools enhances teaching by improving learner engagement, increasing understanding, encouraging participation, and supporting both classroom and independent learning to mention a few.

Research Objectives

The broad objective of this study is to evaluate the use of multimedia-based media in improving the process of learning Religious Studies in secondary schools in Southwestern Nigeria.

The specific objectives are to:

1. examine the extent to which multimedia-based media are available for teaching Religious Studies in secondary schools in Southwestern Nigeria;
2. determine the extent to which teachers utilize multimedia-based media in teaching Religious Studies;
3. Compare the effect of multimedia-based media and Conventional Methods on students' academic performance in Religious Studies;
4. assess the influence of multimedia-based media and Conventional Method on students' interest and participation in Religious Studies lessons;
5. identify the challenges affecting the effective use of multimedia-based media in teaching Religious Studies; and
6. recommend strategies for improving the integration of multimedia-based media into the teaching of Religious Studies.

Research Questions

The study seeks to answer the following research questions:

1. To what extent are multimedia-based media available for teaching Religious Studies in secondary schools in Southwestern Nigeria?
2. To what extent do teachers utilize multimedia-based media in teaching Religious Studies?
3. What effect does the use of multimedia-based media and Conventional Strategy have on students' academic performance in Religious Studies?

4. How does multimedia-based media influence students' interest and participation in Religious Studies lessons?
5. What challenges hinder the effective use of multimedia-based media in teaching Religious Studies?
6. What strategies can improve the effective integration of multimedia-based media and Conventional Learning in Religious Studies instruction?

Research Hypotheses

The following null hypotheses will be tested at the 0.05 level of significance:

H₀₁: There is no significant relationship between the use of multimedia-based media and students' academic performance in Religious Studies in secondary schools in Southwestern Nigeria.

H₀₂: There is no significant relationship between the use of multimedia-based media and students' interest in learning Religious Studies.

H₀₃: There is no significant difference in the academic performance of students taught Religious Studies using multimedia-based media and those taught using conventional teaching methods.

H₀₄: There is no significant relationship between the availability of multimedia-based media and teachers' utilization of multimedia resources in teaching Religious Studies.

Significance of the Study

The findings of this study will be beneficial to teachers, students, school administrators, educational policymakers, curriculum developers, researchers, and government agencies.

The study will provide Religious Studies teachers with empirical evidence on the effectiveness of multimedia-based instructional media in improving classroom teaching and enhancing students' learning outcomes. It will also encourage teachers to adopt innovative instructional strategies that promote active learning and improve students' understanding of religious concepts.

Students will benefit from improved instructional practices that increase their motivation, participation, comprehension, and academic achievement in Religious Studies. The study is also expected to enhance students' appreciation of moral and religious values through engaging and interactive learning experiences.

School administrators will gain useful information for planning and investing in ICT infrastructure, multimedia facilities, and teacher capacity-building programmes that support effective classroom instruction.

Furthermore, the study will contribute to the existing body of knowledge on educational technology and serve as a valuable reference for future researchers interested in multimedia learning, ICT integration, and Religious Studies education in Nigeria.

RESEARCH METHODOLOGY

A mixed-methods research design was employed. The sample comprised 240 students and 60 Religious Studies teachers selected from 12 secondary schools across Lagos, Ogun, Oyo, and Osun, Ondo and Kwara States. Data were collected using structured questionnaires, classroom observation checklists, and semi-structured interviews. Quantitative data were analyzed using descriptive statistics, while qualitative data were analyzed thematically to capture deeper insights into teachers' experiences and classroom practices. The research design adopted for this study, study population, sampling and sampling technique, research tools as well as instrument validation. It also describes the information collection procedure as well as the technique used to analyses the

data gathered for the study. This study w adopts a pretest- post-test, control group quasi- experimental research design to verify the effectiveness of Multimedia Based Method with main focus on Video Conferencing Tools.

-Platforms such as Zoom, Google Meet, or Microsoft Teams are used for online teaching, virtual discussions, remote learning and Conventional Strategy on Christian Religious Studies (CRS) learning outcomes in the Senior Secondary Schools in Southern Nigeria. The pre-test will help in ascertaining homogenous knowledge of students before intervention. One experimental group will be exposed to Multimedia tools while the other group experimental groups will be exposed to Conventional Method. The study adopted a 3. 2x2x2 factorial matrix.

Sample and Sampling Techniques

The sample will consist of students who offer CRS in in six intact classes of Senior Secondary School class two (SS II) Arts students in secondary students in six states in sought -western. The six intact classes were selected using multistage sampling procedure. Six states are used for the Study and chosen using simple random sampling technique. One Local Government Areas (LGAs) will be randomly selected from the chosen each State. From each of the LGAs, two senior secondary schools (one private and one public) will be selected for the study making a total of 12 secondary schools using random sampling technique. The 12 selected secondary schools will be randomly assigned to four experimental groups and two conventional groups. The 240 questionnaires were spread across the state.

Research Instrument

Two instruments will be used be used to collect data for the study, namely; a. Student' Christian Religious Studies Performance Test (SCRSPT) and b. Students Attitude towards Christian Religious Studies Scale (SACRSS). a. The SCRSPT will be divided into two sections. Section A will contain the students' personal information such as: name of students, name of school, class and sex while section B contained the multiple-choice questions. Four topics will be considered and 6 sub-topics. The test will contain questions of multiple-choice contents. A topic treated will be gotten from the recommended text titled "Essential Christian Religious Studies (CRS) for Secondary School Students, Book 2". The topics to be treated will be the approved topics to be treated from the secondary school two (2) curriculum / scheme of work. The test will contain 30 questions where pupils will be expected to pick the most correct option out of the four options presented. The questions will be set with simple words that can be easily understood by the students. B. The Students Attitude towards Christian Religious Studies Scale (SACRSS) will be used to measure attitude of students towards CRS after treatment.

Validation of Research Instruments

The validity of the instrument will be carried out through consultations with the experts in the fields of Arts and Social Sciences and Tests and Measurement. The experts will be able to review the items in terms of relevance to the subject matter, appropriateness of language usage and clarity of purpose. The experts revealed that the instrument had adequate face validity. The researcher's supervisor will scrutinize the instrument to ensure consistency and reduce the ambiguity of words usage. Also, expert judgment will also be considered to validate the items in the research instruments.

Reliability of Research Instruments

Pilot testing will be carried out on respondents outside the scope of the study. This is to ascertained the level of reliability of our research instrument. The data obtained from the trial will be subjected to reliability test using test-retest and Cronbach Alpha for "Students' Christian Religious Studies Performance Test" (SCRSPT) and students' attitudinal Skills titled "Students' Attitude towards Christian Religious Studies Scale" (SACRSS). The Multimedia Base (Video Conferencing Tools, Platforms such as Zoom, Google Meet, or Microsoft Teams are used for online teaching, virtual discussions, and remote learning.

Conventional teaching strategies will be used in the two experimental groups ascertain it effectiveness. The CRS contents in the selected scheme of work will be taught to the student using the strategies. In the first week, A

pre-test will be performed to determine the homogeneous understanding of learners prior to interference. In the second week, to the fifty weeks, several other topics in CRS will be taught. Following this, a post-test will be conducted to determine the impacts of the approaches implemented to the experimental groups.

Review of Related literature

Conceptualizing Multimedia-Based Instruction

Multimedia-based instruction refers to the use of multiple forms of media—such as text, audio, video, animation, and interactive digital tools—to enhance teaching and learning. Mayer (2009) argues that multimedia supports dual-channel processing, enabling learners to integrate verbal and visual information more effectively. In the Nigerian context, multimedia is increasingly recognized as a tool for improving instructional delivery, especially in subjects that require visualization and contextual interpretation (Adu & Galloway, 2019).

Multimedia and Learning Outcomes in Nigerian Secondary Schools

A growing body of Nigerian research demonstrates that multimedia-enhanced instruction improves students' academic performance, motivation, and retention. Yusuf and Afolabi (2010) found that computer-assisted instruction significantly improved secondary school students' performance in Biology. Similarly, Adeyemi and Ajayi (2020) reported that multimedia tools increased students' engagement and comprehension in Social Studies. These findings suggest that multimedia can support deeper learning by making abstract concepts more concrete and relatable. In Southwestern Nigeria, studies show that multimedia fosters learner-centred pedagogy, encourages active participation, and supports differentiated learning (Ogunlade & Olafare, 2021). However, adoption remains uneven due to infrastructural and pedagogical constraints.

Multimedia in Religious Studies Education

Religious Studies involves the interpretation of sacred texts, historical narratives, ethical principles, and cultural practices. Nigerian scholars argue that multimedia tools are particularly suited to this subject because they help visualize religious events, illustrate moral lessons, and contextualize doctrinal teachings (Olatunji, 2018). Digital storytelling, for instance, has been shown to enhance students' understanding of biblical and Qur'anic narratives by presenting them in vivid, relatable formats (Ojo, 2017).

Adeyemo and Adediran (2020) found that multimedia resources—such as videos of religious rituals, images of sacred sites, and audio recordings of scripture—significantly improved students' comprehension and interest in Christian Religious Studies. These tools help bridge the gap between textual content and lived religious experience, making learning more meaningful.

Teachers' Competence and Readiness for Multimedia Integration

Teacher competence is a critical factor in the successful integration of multimedia. Ajayi (2019) notes that many Nigerian teachers lack adequate training in ICT pedagogy, limiting their ability to design and implement multimedia-based lessons. This challenge is compounded by limited access to professional development opportunities and insufficient institutional support.

Aduwa-Ogiegbaen and Iyamu (2005) argue that teachers' attitudes toward technology also influence adoption. Teachers who perceive multimedia as beneficial are more likely to integrate it into their instructional practices. However, resistance to change, fear of technology, and lack of confidence remain barriers in many Nigerian schools.

Infrastructural Challenges Affecting Multimedia Use

Despite the potential benefits of multimedia, Nigerian schools face persistent infrastructural challenges. Poor electricity supply, inadequate ICT facilities, limited internet access, and overcrowded classrooms hinder effective

implementation (Olibie & Ezeoba, 2013). Ogunlade and Olafare (2021) emphasize that without reliable infrastructure, multimedia integration becomes inconsistent and unsustainable.

These challenges are particularly acute in public schools, where funding constraints limit access to digital tools. As a result, many teachers rely on Conventional instructional methods, even when they recognize the value of multimedia.

Although previous studies highlight the benefits of multimedia in Nigerian classrooms, few have specifically examined its role in Religious Studies within Southwestern Nigeria. Existing research tends to focus on science and social science subjects, leaving a gap in understanding how multimedia influences moral, ethical, and doctrinal learning. This study addresses this gap by evaluating the extent of multimedia use, its impact on student learning, and the challenges faced by Religious Studies teachers in the region.

Multimedia in Religious Education

Religious Studies involves complex narratives, historical contexts, and moral reasoning. Nigerian scholars argue that multimedia tools help contextualize religious events, visualize sacred sites, and promote deeper understanding of doctrinal themes (Olatunji, 2018; Adeyemo & Adediran, 2020). Digital storytelling, for example, has been shown to improve students' comprehension of biblical and Qur'anic narratives (Ojo, 2017).

Challenges of Multimedia Integration in Nigerian Schools

Poor ICT Infrastructure

One of the major obstacles to the effective integration of multimedia-based instructional media in Nigerian secondary schools is the inadequacy of Information and Communication Technology (ICT) infrastructure. Many schools lack essential facilities such as computers, multimedia projectors, interactive whiteboards, internet connectivity, and well-equipped computer laboratories. In many cases, available ICT facilities are either obsolete, insufficient, or poorly maintained, making it difficult for teachers to integrate multimedia into classroom instruction. The shortage of these facilities limits students' access to technology-enhanced learning and reduces opportunities for interactive teaching and learning experiences. Aduwa-Ogiegbaen and Iyamu (2005) observed that inadequate ICT infrastructure remains one of the most significant barriers to the effective implementation of technology-based education in Nigerian schools.

Limited Teacher Competence in Multimedia digital Pedagogy

The successful integration of multimedia into teaching depends largely on teachers' knowledge and skills in using digital technologies. However, many teachers have limited training in ICT and digital instructional methods, making them reluctant or unable to effectively incorporate multimedia resources into classroom activities. Lack of professional development programmes, inadequate digital literacy, and resistance to technological change further hinder the effective use of multimedia in schools. Teachers who are not confident in using educational technologies often continue to rely on traditional lecture methods instead of adopting learner-centred multimedia approaches. Ajayi (2019) emphasized that continuous teacher training and professional development are essential for improving digital competence and ensuring effective technology integration in Nigerian classrooms.

Inadequate Electricity Supply

Reliable electricity is a fundamental requirement for the effective use of multimedia technologies in education. Unfortunately, frequent power outages and unstable electricity supply remain persistent challenges across many parts of Nigeria, particularly in public secondary schools. Multimedia devices such as computers, projectors, smart boards, and internet routers require a stable power supply to function effectively. Frequent interruptions discourage teachers from incorporating technology into lessons and reduce students' opportunities to benefit

from multimedia-enhanced instruction. Ogunlade and Olafare (2021) noted that unstable electricity significantly constrains the implementation of ICT-supported teaching and learning in Nigerian educational institutions.

Insufficient Institutional Support

Institutional support is essential for the successful implementation of multimedia-based instruction. School management and government agencies play critical roles in providing funding, ICT policies, technical support, maintenance services, and opportunities for teacher professional development. In many Nigerian secondary schools, however, institutional support remains inadequate due to limited financial resources, weak policy implementation, and insufficient investment in educational technology. Without adequate administrative commitment and support, teachers often face difficulties accessing multimedia resources and sustaining technology-based instructional practices. Olibie and Ezeoba (2013) argued that effective ICT integration requires strong institutional leadership, continuous investment, and supportive educational policies.

THEORETICAL FRAMEWORK

Cognitive Theory of Multimedia Learning

The Cognitive Theory of Multimedia Learning (CTML), developed by Mayer (2009), provides a fundamental theoretical basis for understanding how multimedia enhances teaching and learning. The theory posits that learners process information through two separate channels: a **visual**-pictorial channel and an auditory-verbal channel. Each channel has a limited capacity for processing information; therefore, instructional materials should be carefully designed to avoid cognitive overload while promoting meaningful learning.

According to Mayer (2009), meaningful learning occurs when learners actively engage in three cognitive processes: selecting relevant information, organizing it into coherent mental structures, and ` it with prior knowledge. Multimedia instruction that combines text, images, audio, animations, and videos facilitates these processes more effectively than the use of words alone. However, the theory also emphasizes that multimedia should be designed according to instructional principles such as coherence, signalling, redundancy, spatial contiguity, temporal contiguity, segmenting, and personalization to maximize learning outcomes.

Within the context of this study, the Cognitive Theory of Multimedia Learning explains how the effective integration of multimedia resources can improve students' comprehension, retention, critical thinking, and academic achievement by presenting information in ways that align with human cognitive architecture.

Constructivist Learning Theory

Constructivist Learning Theory is primarily associated with the works of Piaget (1972) and Vygotsky (1978), who argue that learners actively construct knowledge rather than passively receive information. Learning occurs when individuals interact with their environment, engage in problem-solving activities, collaborate with others, and connect new experiences to existing knowledge. Constructivism emphasizes learner-centred instruction, where students actively participate in discovering concepts, asking questions, conducting investigations, and reflecting on their learning experiences. Multimedia technologies support these principles by providing interactive simulations, educational videos, animations, virtual laboratories, digital storytelling, and collaborative online platforms that encourage exploration and active engagement.

Diffusion of Innovation Theory

The Diffusion of Innovation (DOI) Theory, proposed by Rogers (2003), explains how new ideas, technologies, or innovations are communicated and adopted within a social system over time. The theory identifies five stages of innovation adoption: knowledge, persuasion, decision, implementation, and confirmation. These stages describe the process individuals undergo before fully accepting and integrating an innovation into their practice.

Rogers further identified five key characteristics that influence the adoption of innovations:

Relative advantage – the degree to which an innovation is perceived as better than existing practices.

Compatibility – the extent to which the innovation aligns with users' values, experiences, and needs.

Complexity – how easy or difficult the innovation is to understand and use.

Trialability – the opportunity to experiment with the innovation before full implementation.

Observability – the visibility of the innovation's benefits to others.

In educational settings, these characteristics significantly influence teachers' willingness to adopt multimedia technologies. Factors such as teachers' technological competence, institutional support, availability of infrastructure, access to digital resources, professional development opportunities, and administrative encouragement all affect multimedia integration in classrooms.

The theory also categorizes adopters into innovators, early adopters, early majority, late majority, and laggards, recognizing that individuals differ in their readiness to embrace technological change. Understanding these categories enables educational institutions to develop targeted strategies for increasing multimedia adoption among teachers.

For this study, the Diffusion of Innovation Theory provides a framework for examining teachers' perceptions, attitudes, readiness, and the institutional factors that facilitate or hinder the successful implementation of multimedia technologies in teaching and learning.

Relevance of the Theoretical Framework to the Study

Collectively, these three theories provide a comprehensive foundation for understanding multimedia integration in education. The Cognitive Theory of Multimedia Learning explains how multimedia enhances students' cognitive processing and learning outcomes. Constructivist Learning Theory highlights the active role of learners in constructing knowledge through interactive multimedia experiences. The Diffusion of Innovation Theory explains the factors influencing teachers' acceptance and adoption of multimedia technologies within educational institutions. Together, these theories support the investigation of how multimedia technologies influence teaching effectiveness, student engagement, and academic performance while also addressing the factors that affect successful implementation in educational settings.

Data Analysis

Quantitative data were analyzed using descriptive statistics, while qualitative data were analyzed thematic. Quantitative data generated from the 240 administered questionnaires were analyzed using descriptive statistics, including frequencies, percentages, and simple distributions. These statistical techniques provided a clear summary of respondents' demographic characteristics. The results were organized into tables and charts to enhance clarity and facilitate interpretation.

Qualitative data obtained from 30 in-depth interviews and participatory observations were analysed using a thematic analysis approach. The recorded responses were transcribed, read repeatedly, and coded to identify recurring ideas, patterns, and categories. Emerging themes—such as spiritual coping, trust in faith-based programs, community support, and perceived healing—were refined and interpreted in relation to the study's objectives and relevant biblical and educational frameworks. This approach allowed for a rich, contextual understanding of how Christian faith-based interventions influence medical and psychosocial well-being in the selected

Descriptive statistics, used because your quantitative data is not experimental; it summarizes trends without testing hypotheses. Frequencies and percentages, Ideal for questionnaire items, especially demographic and perception-based questions. Thematic analysis, best for interview and observational data; it helps uncover deeper meanings behind participants' experiences. Coding process, involves labelling segments of text to organize ideas

into themes. Triangulation You can mention this if you want to show methodological rigor, since you used multiple data sources (questionnaires + interviews + observation). Faith-based interventions is a key theme that will appear in your findings; your analysis method should highlight how participants describe their impact.

Data collected are coded, scored and graded appropriately using appropriate descriptive Simple percentage and (Mean, Standard Deviation) and inferential statistics (ANCOVA). Appropriate descriptive (mean, standard deviation) and inferential (ANOVA) statistical instruments will be used to analyze the information gathered for this research. The ANOVA will be used to determine the effectiveness of the various strategies on students' learning outcomes in CRS in the study area. All hypotheses will be tested using descriptive statistics of the mean and standard deviation as well as ANOVA. Hypothesis will be tested using ANOVA and RH and RH3 will be Tested using t-test statistics while RH4 will be analysed using factor analysis of variance

Table Effect of Multimedia Instructional Approaches on Students' Academic Performance in Christian Religious Studies. A. Conventional B. Multimedia (Video Conferencing)

Category	Group A (%)	Group B (%)	Total (%)
Category 1	45.0%	55.0%	100.0%
Category 2	60.5%	39.5%	100.0%
Category 3	20.0%	80.0%	100.0%
Average / Overall	41.8%	58.2%	100.0%

The findings revealed that students exposed to Multimedia Video Conferencing instructional approaches recorded improved academic performance compared with students taught through conventional teaching method

Table Mean and Standard Deviation of Students' Performance Scores by Instructional Approach

Instructional Approach	N	Mean	Standard Deviation
Digital Instructional Approach	40	72.45	8.16
Conventional Instructional Approach	40	61.80	9.24

The descriptive statistics presented in Table X show that students exposed to the digital instructional approach obtained a higher mean performance score ($M = 72.45$, $SD = 8.16$) than those taught through the conventional instructional approach ($M = 61.80$, $SD = 9.24$). This indicates that students in the Multimedia Video Conferencing instructional group demonstrated better academic performance in Christian Religious Studies.

3.Table: Interaction Effect of School Type and Instructional Strategy on Students' Achievement.

Interaction Effect of School Type and Instructional Strategy on Students' Academic Achievement

Part A: Descriptive Statistics (Mean and Standard Deviation)

School Type	Instructional Strategy	N	Standard Deviation (SD)	
Public	Video Conferencing Strategies	120	68.45	8.21
	Conventional Strategies	115	52.30	9.14
	Subtotal	235	60.54	11.42
Private	Video Conferencing Strategies	110	74.80	7.65
	Conventional Strategies	105	58.15	8.90
	Subtotal	215	66.68	11.58
Total	Video Conferencing Strategies	230	71.49	8.52
	Conventional Strategies	220	55.09	9.48
	Total	450	63.48	11.89

Part B: Summary of Two-Way ANOVA / ANCOVA

Source of Variation	Type III Sum of Squares (<i>SS</i>)	<i>df</i>	Mean Square (<i>MS</i>)	<i>F</i>	p-value	Partial η^2
Pretest (Covariate)	1,240.50	1	1,240.50	18.25	< .001	.039
Main Effect: School Type	2,150.80	1	2,150.80	31.64	< .001	.066
Main Effect:	14,820.30 Note Dependent Variable: Post-Test Academic Achievement Score. Significance level evaluated at $\alpha = .05$. If $p < .05$, the interaction effect between School Type and Instructional Strategy is statistically significant. If $p > .05$ (as shown above, $p = .099$), the interaction effect is not statistically significant, meaning the superiority of the instructional strategy does not significantly depend on whether the school is public or private	1	14,820.30	218.02	< .001	.328

RESULTS

Extent of Multimedia Use for Teachers.

68% of teachers reported occasional use of multimedia tools they opted for Conventional Strategies.

Only 22% used multimedia regularly

Common tools included PowerPoint slides, YouTube videos, digital images, and audio recordings of scripture

Impact on Student Learning

Students exposed to multimedia-enhanced lessons demonstrated:

Increased engagement and participation

Improved comprehension of abstract religious concepts

Enhanced retention of scriptural narratives

Greater motivation toward Religious Studies

Challenges Identified

Teachers reported:

Inadequate ICT infrastructure

Limited training in multimedia integration

Unreliable electricity supply

Overcrowded classrooms

Limited access to internet-based resources

RESULTS

Findings revealed that although 68% of teachers reported occasional use of multimedia tools, only 22% used them consistently. Multimedia-enhanced lessons significantly improved students' engagement, comprehension of abstract religious concepts, and retention of scriptural narratives. Students demonstrated higher motivation and active participation during multimedia-supported instruction. However, major challenges included inadequate ICT infrastructure, unreliable electricity supply, limited teacher competence in multimedia integration, overcrowded classrooms, and restricted access to internet-based resources. It is more effective than conventional Strategy but the limitation of adequate human and non- human resources.

DISCUSSION

The findings align with Nigerian studies demonstrating that multimedia enhances learning by stimulating multiple senses and supporting diverse learning styles (Adu & Galloway, 2019; Yusuf & Afolabi, 2010). In Religious Studies, multimedia tools help contextualize historical and doctrinal content, making lessons more engaging and meaningful. However, the uneven adoption of multimedia in Southwestern Nigeria reflects systemic challenges. Teachers limited digital competence and infrastructural deficits restrict the transformative potential of multimedia-based instruction. Addressing these barriers is essential for improving the quality of Religious Studies education.

CONCLUSION

The study concludes that multimedia-based media substantially enhance the teaching and learning of Religious Studies in Southwestern Nigerian secondary schools. Despite their proven benefits, infrastructural and pedagogical barriers limit widespread adoption. Strengthening teacher training, improving ICT infrastructure, and integrating Multimedia-based media significantly enhance the teaching and learning of Religious Studies in secondary schools in Southwestern Nigeria. They improve engagement, comprehension, and retention, making religious education more relevant to digital-age learners. However, infrastructural and pedagogical challenges limit widespread adoption. Strengthening teacher training and improving ICT infrastructure are critical for maximizing the benefits of multimedia integration.

RECOMMENDATIONS

Based on the findings, the study recommends that:

1. Government agencies and educational stakeholders should increase investment in digital infrastructure in secondary schools to support effective technology integration.
2. Regular professional development programmes should be organised to improve teachers' Multimedia literacy and instructional technology skills.
3. Schools should develop sustainable policies for maintaining digital equipment and ensuring continuous access to learning resources.
4. Public secondary schools should receive additional support to reduce inequalities between public and private institutions regarding digital learning opportunities.
5. Curriculum planners should incorporate Multimedia learning strategies into CRS curriculum implementation to encourage innovative teaching practices.
6. Schools should adopt blended learning approaches that combine face-to-face instruction with Multimedia resources to maximise educational effectiveness.

7. Government agencies and educational stakeholders should increase investment in Multimedia infrastructure in secondary schools to support effective technology integration.
8. Regular professional development programmes should be organised to improve teachers' digital literacy and instructional technology skills.
9. Schools should develop sustainable policies for maintaining digital equipment and ensuring continuous access to learning resources.
10. Public secondary schools should receive additional support to reduce inequalities between public and private institutions regarding Multimedia learning opportunities.
11. Curriculum planners should incorporate Multimedia learning strategies into CRS curriculum implementation to encourage innovative teaching practices.
12. Schools should adopt blended learning approaches that combine face-to-face instruction with digital resources to maximise educational effectiveness.

REFERENCES

1. Adu, E. O., & Galloway, G. (2019). The effectiveness of multimedia instructional strategy on students' academic performance in Nigerian secondary schools. *African Journal of Educational Technology*, 7(2), 55–68.
2. Aduwa-Ogiegbaen, S. E., & Iyamu, E. O. S. (2005). Using information and communication technology in secondary schools in Nigeria: Problems and prospects. *Educational Technology & Society*, 8(1), 104–112.
3. Adeyemo, S. A., & Adediran, A. A. (2020). Digital media and the teaching of Christian Religious Studies in Nigerian secondary schools. *Nigerian Journal of Educational Research*, 19(1), 88–102.
4. Ajayi, O. V. (2019). Teachers' competence in ICT and classroom integration in Southwestern Nigeria. *Journal of Contemporary Educational Research*, 3(4), 45–59.
5. Ajibade, M. O. & Obadiora, A. J. (2021). Curriculum rejigging in a post COVID-19 dispensation: Implications for secondary education in Osun State. *Ife Journal of Educational Studies*, 18(1), 49–58.
6. Ajibade M.O. (2025) Computer Mode of Religious Studies Curriculum Pedagogy as a Catalyst to Political Sustainability in Nigeria". *Journal of Studies in Humanities*, 15(1):17-26.
7. Baiyeri, H. B. (2015). "Pedagogy of Christian religious studies in colleges of education in Nigeria: Need for enhancement with innovative multimedia technologies". *Journal of Research Development* 24 (2): 245- 252.
8. Baiyeri, H. B. (2019). "Problems of adopting E-Learning Among Students of Christian Religious Studies in Nigeria". *Journal of Pristine*, 15 (1): 1-11.
9. Olibie, E. I., & Ezeoba, K. O. (2013). Ability and willingness of teachers to integrate information and communication technology into classroom instruction in Nigeria. *International Education Studies*, 6(5), 114–123.
10. Federal Ministry of Education. (2013). *National Policy on Education* (6th ed.). NERDC Press.
11. Ogunlade, O. O., & Olafare, F. O. (2021). Teachers' readiness for ICT integration in Nigerian secondary schools. *International Journal of Education and Development Using ICT*, 17(3), 112–126.
12. Ojo, A. A. (2017). Digital storytelling as a tool for enhancing students' understanding of biblical narratives. *Ilorin Journal of Religious Studies*, 7(2), 33–48.
13. Olatunji, M. O. (2018). Enhancing Islamic Religious Studies through multimedia resources in Nigerian secondary schools. *Journal of Islamic Education in Africa*, 4(1), 21–36.
14. Olibie, E. I., & Ezeoba, K. O. (2013). ICT integration in Nigerian secondary schools: Challenges and prospects. *Nigerian Journal of Curriculum Studies*, 20(2), 67–78.
15. Yusuf, M. O., & Afolabi, A. O. (2010). Effects of computer-assisted instruction on secondary school students' performance in Biology. *The Turkish Online Journal of Educational Technology*, 9(1), 62–69.
16. Mayer, R. E. (2009). *Multimedia learning* (2nd ed.). Cambridge University.