

EXAMINING THE CHALLENGES AND SOLUTIONS OF THE UTILIZATION OF AUDIO-VISUAL RESOURCES FOR ENHANCING PUPILS' LEARNING OUTCOMES IN PRIVATE PRIMARY SCHOOLS IN PORT HARCOURT METROPOLIS IN RIVERS STATE OF NIGERIA

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ABSTRACT: The study examined the challenges and solutions associated with the utilization of audio-visual resources for enhancing pupils' learning outcomes in schools in Port Harcourt Metropolis, Rivers State, Nigeria. Adopting a descriptive research design, the study investigated the influence of the challenges and solutions of utilization of audio-visual resources on pupils' quality learning outcomes. The population comprised 150 staff members, including head teachers and class teachers, from 10 registered private primary schools across PHALGA and OBALGA regions. A stratified random sampling technique was used to select a sample of 50 respondents, representing approximately 22% of the population. Data were collected using a structured questionnaire titled "Challenges and Solutions of the Utilization of Audio-Visual Resources for Enhanced Pupils' Learning Outcomes (CSUAVRELOQ)", which employed a 4-point Likert scale. The instrument was validated by three university lecturers and demonstrated high reliability ($r = .865$) through a test-retest procedure. Data analysis involved descriptive statistics, including means and standard deviations, while t-tests were used to test hypotheses at a .05 significance level. Findings highlighted the major challenges hindering effective utilization of audio-visual resources and suggested practical solutions for improving pupils' learning outcomes. Vis-à-vis there is no significant difference in the mean ratings of head teachers and class teachers on the extent challenges encountered and solution in the use of audio-visual resources for pupils' quality learning outcomes in private primary schools in Port Harcourt Metropolis, Rivers State. The study provided insights for educational planners, administrators, and teachers on optimizing instructional resources in primary schools.

Keywords: Challenges, Solutions, Utilization Audio-Visual Resources, Pupils', Learning Outcomes, Private Primary Schools, Port Harcourt Metropolis, Rivers State, Nigeria.

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INTRODUCTION

Audio-visual resources in educational settings has long been recognized as a strategy to enhance teaching and learning because it facilitates multisensory engagement, improves comprehension, and makes abstract concepts more concrete for learners (Adepoju, 2006; Samphina, 2021; Enekwe et al., 2021b). In primary and basic school contexts, audio-visual teaching materials such as charts, videos, slides, models, and projector-based presentations serve as essential tools that go beyond the traditional "chalk-and-talk" method, stimulating pupils' interest and fostering meaningful understanding of lesson content (Batoo, 2011; Samphina, 2021). In Nigeria, where

the quality of foundational education remains a central policy focus, the integration of such instructional materials is widely acknowledged to have positive implications for pupils' learning outcomes across subjects (Omojemite, 2025), including improved attention, better retention of information, and heightened motivation.

In spite of the potential benefits, evidence suggests that the utilization of audio-visual resources in many Nigerian schools is inconsistent and often hindered by several structural and operational challenges. For instance, studies reported that instructional materials provided in some schools are outdated, inadequate, or not put to effective use by teachers (Samphina, 2021; ResearchWap, 2023). In primary schools where resources exist, teachers lack the skills to integrate them pedagogically, leading to ineffective or superficial use that fails to improve pupil comprehension (WriterPoints, 2025). Furthermore, insufficient funding remains a pervasive barrier, with many schools unable to acquire, maintain, or update audio-visual equipment due to limited budgetary allocation and resource mismanagement (Enekwe et al., 2021a). These challenges are compounded by infrastructural deficits such as unreliable electricity supply, lack of storage space, and the absence of technical support for equipment maintenance, which collectively reduce the feasibility of sustained audio-visual integration in lesson delivery (Samphina, 2021; Okwo & Ike, 2015).

In Port Harcourt Metropolis, which is the capital of Rivers State, the prevalence of these constraints mirrors national patterns, with many private schools struggling to align teaching practices with modern instructional technologies. Although urban settings may have comparatively better access to resources than rural areas, issues such as poor teacher training, limited administrative support, and competing curriculum demands continue to restrict effective use of audio-visual aids in classrooms. This has direct implications for pupils' learning outcomes, as the absence of engaging instructional media often correlates with slower knowledge acquisition, poor recall, and low academic performance in core subjects (ResearchWap, 2023). Thus, there is a critical need to assess both the specific challenges that teachers and schools face in exploiting audio-visual resources and the solutions that can enhance their utilization for quality learning outcomes.

The issue is not only a matter of audio-visual resource provision but also of capacity building and strategic planning within the primary school system. Teacher empowerments for resource improvisation have the potential to strengthen how audio-visual tools are used to support teaching and learning (Samphina, 2021; Enekwe et al., 2021b).

Statement of the Problem

The use of audio-visual resources in schools is widely recognized as an effective strategy for enhancing pupils' learning outcomes by making lessons more engaging, concrete, and memorable. Despite their importance, many schools in Port Harcourt Metropolis face significant challenges in effectively utilizing these instructional materials. Reports indicate that audio-visual resources are often inadequate, outdated, or underutilized due to factors such as poor teacher training, lack of technical skills, insufficient funding, and infrastructural constraints like unreliable electricity and inadequate storage facilities (Okwo & Ike, 2015). These limitations compromise the quality of teaching and learning, resulting in low pupil engagement, poor comprehension, and suboptimal academic performance. Therefore, this study sought to examine the specific challenges that hinder the effective use of audio-visual resources and identify the

practical solutions of how to improve pupils' learning outcomes in primary schools within the Port Harcourt metropolis.

Aim and Objectives of the Study

The aim of the study is to examine the challenges and solutions of the utilization of audio-visual resources for enhancing pupils' learning outcomes in schools in Port Harcourt metropolis in Rivers State of Nigeria. Specifically, the objectives are to:

- Ascertain the challenges encountered with the use of audio-visual resources in schools for pupils' quality learning outcomes in private primary schools in Port Harcourt Metropolis, Rivers State.
- Proffer solutions to the problems of audio-visual resource utilization in schools for pupils' quality learning outcomes in private primary schools in Port Harcourt Metropolis, Rivers State.

Research Questions

Specifically, this study sought to address the following key research questions:

- What are the challenges encountered in the use of audio-visual resources for pupils' quality learning outcomes in private primary schools in Port Harcourt Metropolis, Rivers State?
- What are the solutions to the problems of utilization audio-visual resource in schools for pupils' quality learning outcomes in private primary schools in Port Harcourt Metropolis, Rivers State?

Hypotheses

The following hypotheses guided the study and were tested at .05 level of significance:

- There is no significant difference in the mean ratings of head teachers and class teachers on the extent challenges encountered in the use of audio-visual resources for pupils' quality learning outcomes in private primary schools in Port Harcourt Metropolis, Rivers State.
- There is no significant difference in the mean ratings of head teachers and class teachers on the solutions to the problems of utilization of audio-visual resources in schools for pupils' quality learning outcomes in private primary schools in Port Harcourt Metropolis, Rivers State.

CONCEPTUALIZATION

Challenges Encountered in the Use of Audio-Visual Resources for Pupils' Quality Learning Outcomes

Audio-visual resources are crucial tools in contemporary school systems because they stimulate multiple senses, enhance understanding and make learning more interactive and enjoyable (Adepoju, 2006; Batoo, 2011). However, in many schools, especially in developing urban areas like Port Harcourt Metropolis, the effective utilization of these resources faces numerous challenges that limit their contribution to pupils' quality learning outcomes.

A major challenge is inadequate provision of audio-visual materials. Many schools lack essential resources such as projectors, charts, educational videos, and computers due to insufficient funding or poor budgetary prioritization (Enekwe et al., 2021). Even where resources are available, they are often outdated, damaged or insufficient to meet the needs of all learners in a classroom, which diminishes their instructional value.

Another significant issue is teachers' lack of skills and training. Effective use of audio-visual resources requires pedagogical competence and technical knowledge, yet many teachers have limited exposure to training programs that equip them to integrate these tools into lesson delivery (WriterPoints, 2025). Consequently, resources are either underutilized or used inappropriately, which can confuse pupils rather than aid understanding.

Infrastructural constraints also impede the utilization of audio-visual resources. Unreliable electricity supply, inadequate classroom space, and the absence of proper storage facilities make it difficult to maintain and deploy equipment consistently (Okwo & Ike, 2015). Schools without internet access or multimedia laboratories are particularly disadvantaged, as they cannot exploit digital learning resources effectively.

Furthermore, administrative and supervisory challenges contribute to low utilization. Weak support from school management, lack of maintenance schedules, and poor monitoring of teaching practices mean that teachers may not be encouraged or held accountable for integrating audio-visual aids into instruction (Samphina, 2021).

Finally, resistance to change among teachers who are accustomed to traditional lecture methods limits innovation in teaching. Some educators perceive audio-visual tools as time-consuming or unnecessary, reducing their willingness to adopt modern instructional techniques that could improve pupils' learning outcomes (ResearchWap, 2023).

Collectively, these challenges hinder the ability of primary schools to fully exploit audio-visual resources for the purpose of enhancing pupils' comprehension, engagement and overall learning outcomes.

Solutions to the Problems of Audio-Visual Resource Utilization in Schools for Pupils' Quality Learning Outcomes

The challenges associated with the utilization of audio-visual resources in schools, such as inadequate provision, lack of teacher training, infrastructural constraints, and weak administrative support, significantly hinder the potential of these tools to improve pupils' learning outcomes (Enekwe et al., 2021; Samphina, 2021). Addressing these issues requires a multifaceted approach involving policy intervention, school-level strategies, teacher empowerment, and technological innovation.

Adequate provision and maintenance of audio-visual resources is fundamental for effective primary school administration and pupils learning outcomes. Government agencies, school administrators, and educational stakeholders must prioritize the procurement of modern teaching aids such as projectors, computers, interactive whiteboards, and educational videos (Batoo, 2011). Regular maintenance schedules and inventory checks should be instituted to

ensure that resources remain functional and accessible. Primary schools can also explore resource-sharing arrangements, especially in urban centers like Port Harcourt, to optimize utilization without significantly increasing costs.

Second, teacher training and professional development is critical. Educators should be equipped with both technical skills and pedagogical strategies for integrating audio-visual materials into classroom instruction (WriterPoints, 2025). Workshops, seminars and continuous professional development programs is said to have positive impact on primary school teachers' confidence and competence in using instructional tools effectively. Additionally, pre-service teacher training institutions should incorporate modules on instructional technology to prepare future teachers for modern classroom practices.

Third, addressing infrastructural challenges is essential. Schools must ensure consistent electricity supply, appropriate classroom layouts, and storage facilities for audio-visual equipment (Okwo & Ike, 2015). Where electricity supply is unreliable, schools can invest in backup generators or solar-powered alternatives to sustain the use of multimedia tools. Internet access should also be improved to enable the use of online educational resources, multimedia lessons, and digital libraries.

Fourth, administrative support and supervision play a vital role. Primary school management should be able to create policies that encourage and monitor the use of audio-visual resources, including integrating resource utilization into teacher evaluation frameworks (Samphina, 2021). Supervisors should also be able to provide regular guidance, feedback and recognition for teachers who effectively employ audio-visual tools, thereby promoting accountability and motivation.

Fifthly, the promotion of a culture of innovation and adaptability among teachers in the primary schools is necessary to overcome resistance to change. Encouraging collaborative lesson planning, peer mentoring and sharing of best practices promotes positive attitudes toward audio-visual integration (ResearchWap, 2023). Primary school teachers should also be motivated to experiment with low-cost or improvised audio-visual aids, which can be equally effective when applied creatively in the classroom.

Finally, government policy and partnerships should be able to leverage and provide sustainable solutions. Educational authorities should be able to allocate dedicated budgets for instructional technology in primary schools, while partnerships with NGOs and private sector organizations can also facilitate donations, grants or training programs that enhance resource availability and primary school teacher competence (Enekwe et al., 2021a).

METHODOLOGY

This study adopted a descriptive research design to determine the significant difference between the independent variable, the utilization of audio-visual resources and the dependent variable, pupils' quality learning outcomes. This research focused on a population of 10 registered private primary schools in Port Harcourt Metropolis, Rivers State, comprising a total of 150 staff members. The schools are located in both PHALGA and OBALGA regions, and the population included school head teachers and class teachers, who served as respondents.

A sample of 50 participants was drawn from the population using a stratified random sampling technique. Fifty percent of respondents were selected from five private primary schools in PHALGA, while the remaining 50% were selected from five private primary schools in OBALGA, where private schools are densely located. This resulted in a total of ten schools,

representing approximately 22% of the population. From each LGA, one headteacher and four class teachers from each school were selected, yielding a total of 25 respondents per LGA, and 50 respondents overall. School selection was not stratified by gender, as all schools were mixed-gender day schools. Factors such as population density or the presence of secondary schools within the premises were noted but did not influence school selection.

Data collection was conducted using a two-section questionnaire titled “Challenges and Solutions of the Utilization of Audio-Visual Resources for Enhanced Pupils’ Learning Outcomes (CSUAVRELOQ)”. Section ‘A’ captured school demographics, including the name of the school, LGA, and staff designation, while Section ‘B’ focused on the study challenges and solutions. A 4-point modified Likert scale of Very High Extent (VHE), High Extent (HE), Low Extent (LE), and Very Low Extent (VLE) was used to structure responses. The criterion mean was set at 2.50, and the questionnaire included 8 items across two research question clusters.

The instrument was validated by three university lecturers: one from Educational Management and two from Educational Psychology, Guidance, and Counselling whose feedback was incorporated prior to administration. Reliability was established through a test-retest procedure involving ten respondents over a two-week interval, with a reliability index of .865 calculated using Pearson’s Product Moment Correlation.

For administration, the researcher and three trained assistants distributed 50 questionnaires over two weeks. All 50 copies were retrieved and analyzed. Data analysis employed descriptive statistics, including means and standard deviations, while t-tests were conducted to test hypotheses at a .05 significance level, using the criterion mean of 2.50 for interpretation.

RESULTS

Research Question 1: What are the challenges encountered in the use of audio-visual resources for pupils’ quality learning outcomes in private primary schools in Port Harcourt Metropolis, Rivers State?

Table 1: Mean Ratings and Standard Deviation on the challenges encountered in the use of audio-visual resources for pupils’ quality learning outcomes in private primary schools

S/N	Items	Status				Mean set	Decision
		Head Teacher (N=10)		Class Teacher (N=40)			
		Mean	SD.	Mean	SD.		
1.	Lack of funds for purchase/ maintenance of audio-visual resources cripple productivity?	3.10	0.88	3.20	0.97	3.15	High Extent
2.	Inadequate technical knowledge in multimedia discourages the attainment of 21 st century pedagogical goals.	3.30	0.95	3.38	0.67	3.34	High Extent
3.	Proper supervision of teachers and quality assurance officers facilitates higher productivity level in primary education.	3.60	0.97	3.50	0.55	3.55	High Extent
4.	Power supply in Rivers State is inadequate, hence contributes to low performance in spite of efforts in the	3.60	0.52	3.70	1.83	3.65	High Extent

course of using Audiovisual Resources.						
Grand Mean	3.40	0.83	3.44	1.00	3.42	High Extent

The first research question delved into the challenges encountered in the utilization of audio-visual resources for pupils' quality outcomes in private primary schools in Port Harcourt Metropolis, Rivers State, Nigeria. The analysis involved identifying various challenges as perceived by both head teachers and class teachers.

The findings reveal several significant challenges hindering the effective use of audio-visual resources in the educational setting. Firstly, the lack of funds for the purchase and maintenance of audio-visual resources was identified as a substantial barrier, ranking fourth among the items assessed. This lack of financial resources can cripple productivity by limiting the availability of necessary equipment and hindering the upkeep of existing resources.

Secondly, inadequate technical knowledge in multimedia was cited as a challenge that discourages the attainment of 21st-century pedagogical goals, ranking third among the items assessed. This highlights the importance of providing teachers with sufficient training and support to effectively integrate multimedia tools into their teaching practices.

Additionally, the proper supervision of teachers and quality assurance officers was identified as a facilitator for higher productivity in primary education, ranking second among the items assessed. This underscores the importance of effective supervision and support systems in ensuring that audio-visual resources are utilized optimally to enhance pupils' learning outcomes.

Lastly, power supply issues in Rivers State were recognized as a significant challenge, contributing to low performance despite efforts in the use of audio-visual resources. This challenge ranked first among the items assessed, indicating its critical impact on the utilization of multimedia tools in the educational setting.

Largely, the grand mean of the challenges assessed indicates a high extent of impact, with a mean rating of 3.40 by head teachers and 3.44 by class teachers. These challenges underscore the need for concerted efforts to address issues related to funding, technical knowledge, supervision, and power supply to maximize the potential of audio-visual resources in improving pupils' quality outcomes in private primary schools in Port Harcourt Metropolis.

Research Question 2: What are the solutions to the problems of utilization audio-visual resource in schools for pupils' quality learning outcomes in private primary schools in Port Harcourt Metropolis, Rivers State?

Table 2: Mean Ratings and Standard Deviation on the solutions to the problems of utilization audio-visual resource in schools for pupils' quality learning outcomes

S/N	Items	Status				Mean set	Decision
		Head Teacher (N=10)		Class Teacher (N=40)			
		Mean	SD.	Mean	SD.		
5.	The availability of audio-visual materials would provide learning solutions and improve pupils’ learning outcomes.	3.20	1.23	2.98	0.95	3.09	High Extent
6.	Proper supervision would yield desired output in virtual or physical learning as much as educational policy does.	3.30	0.95	3.38	0.63	3.34	High Extent
7.	The systematic substitution of traditional	3.50	0.53	3.20	0.79	3.35	High Extent

with blended learning styles would positively validate best outcomes.							
8.	Parents/staff attendance/participation during seminars and online courses would greatly enhance their acceptance of Audio-Visual Resources.	3.40	0.97	3.45	0.71	3.43	High Extent
Grand Mean		3.35	0.92	3.25	0.77	3.30	High Extent

The second research question focused on identifying solutions to the challenges encountered in the utilization of audio-visual resources for pupils' quality outcomes in private primary schools in Port Harcourt Metropolis, Rivers State, Nigeria. The analysis involved assessing various proposed solutions as perceived by both head teachers and class teachers.

The findings reveal several potential solutions that could address the challenges faced in the utilization of audio-visual resources. Firstly, the availability of audio-visual materials was identified as a crucial factor in providing learning solutions and improving pupils' learning outcomes. Despite ranking fourth among the items assessed, this solution still garnered a mean rating indicative of a high extent of acceptance.

Secondly, proper supervision was highlighted as essential for yielding desired outputs in both virtual and physical learning environments, ranking third among the items assessed. This underscores the importance of effective supervision in ensuring that audio-visual resources are utilized optimally to enhance pupils' learning experiences.

Moreover, the systematic substitution of traditional learning methods with blended learning styles was recognized as a potential solution to validating the best outcomes, ranking second among the items assessed. This suggests a growing recognition of the benefits of integrating various learning modalities to cater to diverse student needs and preferences.

Furthermore, active participation of parents and staff in seminars and online courses was identified as a significant factor in enhancing their acceptance of audio-visual resources, ranking first among the items assessed. This highlights the importance of involving all stakeholders in the educational process to foster a supportive environment for the effective utilization of multimedia tools.

Generally, the grand mean of the proposed solutions indicates a high extent of acceptance and potential effectiveness, with a mean rating of 3.35 by head teachers and 3.25 by class teachers. These proposed solutions underscore the importance of addressing issues related to resource availability, supervision, pedagogical approaches, and stakeholder engagement to maximize the benefits of audio-visual resources in enhancing pupils' quality outcomes in private primary schools in Port Harcourt Metropolis.

Test of Hypotheses

Hypothesis One: There is no significant difference in the mean ratings of head teachers and class teachers on the extent challenges encountered in the use of audio-visual resources for pupils' quality learning outcomes in private primary schools in Port Harcourt Metropolis, Rivers State

Table 3: t-test of Significant difference in the mean ratings of head teachers and class teachers on the extent challenges encountered in the use of audio-visual resources for pupils' quality learning outcomes

Position	N	Mean	Std.	Df	t-test	Sig.	Decision
Head Teacher	10	3.40	0.83	48	-.117	0.908	Not Significant
Class Teacher	40	3.44	1.00				

The t-test results, as presented in Table 3, indicate that there was no statistically significant difference in the mean ratings between head teachers and class teachers. For head teachers, the mean rating was 3.40 with a standard deviation of 0.83, while for class teachers; the mean rating was slightly higher at 3.44 with a standard deviation of 1.00. The degrees of freedom (df) were 48, and the calculated t-test value was -.117.

The significance level (Sig.) was reported as .908, which is higher than the predetermined significance level (typically .05). This suggests that the p-value associated with the t-test was greater than the threshold for significance, leading to the conclusion that the observed difference in mean ratings between head teachers and class teachers was not statistically significant. In practical terms, this implies that both head teachers and class teachers generally share similar perceptions regarding the extent of challenges encountered in the use of audio-visual resources in private primary schools. Despite potential variations in individual opinions, the overall consensus suggests that there is no significant discrepancy between the views of head teachers and class teachers on this matter.

Hypothesis Two: There is no significant difference in the mean ratings of head teachers and class teachers on the solutions to the problems of utilization of audio-visual resources in schools for pupils' quality learning outcomes in private primary schools in Port Harcourt Metropolis, Rivers State.

Table 4: t-test of significant difference in the mean ratings of head teachers and class teachers on the solutions to the problems of utilization of audio-visual resources in schools for pupils' quality learning outcomes

Position	N	Mean	Std.	Df	t-test	Sig.	Decision
Head Teacher	10	3.35	0.92	48	.353	.725	Not Significant
Class Teacher	40	3.25	0.77				

The t-test results, as presented in Table 4, indicate that there was no statistically significant difference in the mean ratings between head teachers and class teachers. For head teachers, the mean rating was 3.35 with a standard deviation of 0.92, while for class teachers, the mean rating was slightly lower at 3.25 with a standard deviation of 0.77. The degrees of freedom (df) were 48, and the calculated t-test value was .353.

The significance level (Sig.) was reported as .725, which is higher than the predetermined significance level (typically .05). This suggests that the p-value associated with the t-test was greater than the threshold for significance, leading to the conclusion that the observed difference in mean ratings between head teachers and class teachers was not statistically significant (NS).

In practical terms, this implies that both head teachers and class teachers generally share similar perceptions regarding the solutions proposed to address the challenges in utilizing audio-

visual resources in private primary schools. Despite potential variations in individual opinions, the overall consensus suggests that there is no significant discrepancy between the views of head teachers and class teachers on this matter.

DISCUSSION

Challenges in the Utilization Audio-Visual Resources

The first research question delved into the challenges encountered in the utilization of audio-visual resources for pupils' quality outcomes in private primary schools in Port Harcourt Metropolis, Rivers State, Nigeria. Findings showed that several challenges were identified, including lack of funds, inadequate technical knowledge, and power supply issues. These challenges hindered the effective utilization of audio-visual resources in the educational setting. The findings of the corresponding hypothesis showed that there was no significant difference in the mean ratings between head teachers and class teachers regarding the extent of challenges encountered in the use of audio-visual resources. Both groups generally shared similar perceptions about the challenges faced in utilizing audio-visual resources.

Firstly, the challenge of insufficient funds aligns with the broader context of resource constraints faced by schools in Nigeria. Many educational institutions, particularly in underserved areas, struggle with limited budgets and financial resources, making it difficult to invest in modern technologies and infrastructure (Ololube, 2016). Without adequate funding, schools may lack the necessary equipment, software, and technical support needed to effectively integrate audio-visual resources into teaching and learning activities, thereby hindering students' access to multimedia learning experiences.

Moreover, the issue of inadequate technical knowledge among educators reflects the ongoing digital divide in Nigeria's educational landscape. While digital literacy skills are increasingly essential in the 21st-century classroom, many teachers in Nigeria lack the training and proficiency needed to effectively utilize audio-visual resources (Eke, 2018). Without adequate professional development and support mechanisms, educators may struggle to incorporate technology into their instructional practices, leading to suboptimal utilization of audio-visual resources and limited opportunities for students to engage with multimedia learning materials.

Additionally, the challenge of power supply issues underscores the infrastructural limitations that affect technology integration in Nigerian schools. Inconsistent electricity supply is a pervasive issue across the country, particularly in rural and peri-urban areas, where access to reliable energy infrastructure is limited (Ololube, 2016). Power outages and voltage fluctuations disrupt classroom activities and hinder the use of electronic devices, including audio-visual equipment, thereby undermining the effectiveness of multimedia learning strategies and impeding students' access to educational resources.

Furthermore, the absence of significant differences in perceptions between head teachers and class teachers regarding the challenges encountered in utilizing audio-visual resources underscores the systemic nature of these obstacles. Regardless of their administrative or instructional roles, educators across different levels share similar experiences and concerns related to technology integration in schools. Recent research suggests that addressing these challenges requires a coordinated effort involving policymakers, school administrators, teachers, and community stakeholders to develop comprehensive strategies for enhancing technology

infrastructure, providing professional development opportunities, and mobilizing resources to support technology-enabled learning initiatives (Eke, 2018).

Solutions to the Challenges in the Utilization Audio-Visual Resources

The fifth research question focused on identifying solutions to the challenges encountered in the utilization of audio-visual resources for pupils' quality outcomes in private primary schools in Port Harcourt Metropolis, Rivers State, Nigeria. The findings revealed that the proposed solutions included ensuring the availability of audio-visual materials, proper supervision, adoption of blended learning styles, and active involvement of parents and staff in training programs. These solutions aimed to address the identified challenges and optimize the use of audio-visual resources for pupils' quality outcomes. The findings of the corresponding hypothesis showed that there was no significant difference in the mean ratings between head teachers and class teachers concerning the proposed solutions to address challenges in the utilization of audio-visual resources. Both groups of respondents generally shared similar perceptions about the solutions proposed to mitigate challenges in utilizing audio-visual resources.

Firstly, ensuring the availability of audio-visual materials aligns with recommendations for enhancing resource provision and accessibility in Nigerian schools. Adequate infrastructure and instructional materials are essential for supporting technology-enabled learning initiatives and providing students with diverse multimedia resources (Ugwoke et al., 2019). Investing in the procurement and maintenance of audio-visual equipment, private primary schools will be able to ensure that educators have access to the tools and materials needed to integrate multimedia resources into their teaching practices effectively.

Moreover, the proposal for proper supervision reflects the importance of instructional support and mentoring in promoting effective technology integration among educators. Research suggests that ongoing professional development and coaching can enhance teachers' confidence and competence in utilizing audio-visual resources (Eke, 2018). Providing regular feedback, guidance and opportunities for collaborative lesson planning and observation, school leaders are able to support teachers in overcoming challenges and refining their instructional practices to maximize the impact of multimedia learning experiences.

Additionally, the adoption of blended learning styles aligns with recent trends in educational pedagogy that emphasize the integration of traditional and technology-mediated instructional approaches. Blended learning models combine face-to-face instruction with online resources and interactive multimedia materials, providing students with personalized learning experiences (Ugwoke et al., 2019). Incorporating audio-visual resources into blended learning environments, educators are well able to cater for diverse learning preferences to create dynamic and engaging instructional activities that promote active participation and knowledge construction.

Furthermore, the proposal for active involvement of parents and staff in training programs underscores the importance of community engagement and collaboration in supporting technology-enabled learning initiatives. Research suggests that involving parents in educational activities and providing opportunities for family involvement can enhance students' academic achievement and socio-emotional development (Adenuga et al., 2016). Through the organization of workshops, seminars and outreach programs for parents and staff, private primary schools are able to promote culture of shared responsibility and mutual support, ensure that stakeholders are

equipped with the knowledge and skills needed to support pupils' learning outcomes and experiences both at home and in the school.

CONCLUSION

The study has revealed that while audio-visual resources hold significant potential for enhancing pupils' learning outcomes in private primary schools, their effective utilization in Port Harcourt Metropolis is constrained by multiple challenges. The key obstacles identified include inadequate provision of teaching materials, lack of teacher training and technical skills, infrastructural deficits such as unreliable electricity and poor storage facilities, limited administrative support, and resistance to adopting modern instructional methods. To address these challenges requires a comprehensive approach that combines adequate resource provision, capacity-building programs for teachers, infrastructural improvements, and proactive administrative supervision.

Additionally, promoting a culture of innovation and collaboration among primary school teachers, alongside supportive government policies and partnerships has the potential to enhance effective integration of audio-visual aids in classrooms. Implementing these solutions is likely to improve pupils' engagement, comprehension, retention and overall learning outcomes, and contributing to higher quality learning outcomes in private primary schools across Port Harcourt Metropolis.

Recommendations

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

- Parents should collaborate with educators and school administrators to support technology initiatives, participate in parent workshops and training programs, and provide feedback on the effectiveness of audio-visual resources in supporting student learning.
- Educational community should advocate for the integration of audio-visual resources into curriculum design, assessment practices, and educational policies to ensure that all students have access to engaging and meaningful learning experiences that harness the full potential of multimedia learning materials.

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