

Managing Educational Innovations Strategies for Sustainability of Public Secondary Schools in Calabar Education Zone of Cross River State, Nigeria

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Abstract- *This study examined the influence of educational innovation strategies on the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria. The study adopted a descriptive survey research design. The population comprised 2,486 respondents, consisting of 97 principals and 2,389 teachers from public secondary schools in the study area. A stratified random sampling technique was used to select 400 respondents, while 385 properly completed questionnaires were retrieved and analyzed. Data were collected using two researcher-developed instruments titled Educational Innovation Strategies Scale (EISS) and Public Secondary School Sustainability Scale (PSSSS). The instruments were validated by three experts in Educational Management, Measurement and Evaluation, and Curriculum Studies, while reliability coefficients of 0.86 and 0.89 were obtained using Cronbach's Alpha for EISS and PSSSS respectively. Data were analyzed using mean and standard deviation to answer the research questions, with a criterion mean of 2.50 adopted for decision-making. The findings revealed that respondents strongly disagreed that pedagogical innovation strategy, technological innovation strategy, and organisational innovation strategy significantly influence the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria. The study concluded that educational innovation strategies have not been effectively implemented to enhance sustainable development of public secondary schools. It was recommended, among others, that school administrators should strengthen professional development programmes, improve technological infrastructure, and promote innovative organisational practices to enhance the sustainability of public secondary schools.*

Keywords: *Educational innovation strategies; Pedagogical innovation; Technological innovation; Organisational innovation; Sustainability of public secondary schools.*

I. INTRODUCTION

The sustainability of secondary education systems in the contemporary era depends largely on the capacity of educational institutions to adopt and effectively manage innovative strategies that respond to emerging social, technological, economic, and pedagogical challenges. Educational innovations, including digital learning approaches, learner-centred instructional models, improved assessment practices, and technology-driven administrative systems, have become essential for enhancing educational quality and ensuring long-term institutional effectiveness. However, public secondary schools in Nigeria, particularly those within the Calabar Education Zone of Cross River State, continue to experience difficulties in managing and sustaining educational innovations due to inadequate infrastructure, limited funding, insufficient teacher preparedness, resistance to change, and weak implementation frameworks (Avidov-Ungar, 2019; Fullan, 2020). These challenges often hinder the successful integration of innovative practices into school operations, thereby reducing the capacity of schools to improve teaching effectiveness, students' learning outcomes, and overall educational development. According to Fullan (2020), successful educational innovation requires strong leadership, continuous professional support, and systemic planning because innovations fail when they are introduced without adequate structures for implementation and sustainability. Similarly, OECD (2021) noted that education systems must develop adaptive capacities to manage innovation effectively, especially in environments experiencing rapid social and technological transformations.

The inability of public secondary schools to effectively manage educational innovations has

resulted in declining instructional quality, limited utilization of modern teaching approaches, poor responsiveness to changing educational demands, and widening gaps between policy intentions and classroom realities. When innovative initiatives are poorly coordinated, teachers may lack the confidence and competence required to apply new methods, while school administrators may struggle to provide the leadership and resources necessary for successful implementation. These problems threaten the sustainability of secondary education by weakening schools' ability to prepare learners with relevant knowledge, skills, and competencies needed for future challenges. As noted by Hargreaves and O'Connor (2018), sustainable educational improvement requires collaborative cultures, professional learning, and continuous adaptation among stakeholders. Therefore, investigating the strategies for managing educational innovations in public secondary schools in the Calabar Education Zone is necessary to identify effective approaches for overcoming existing barriers and strengthening the sustainability of the secondary education system. The study is further justified by the need to provide empirical evidence that can guide educational administrators, policymakers, and stakeholders in developing innovation management practices that enhance school effectiveness, improve instructional delivery, and promote sustainable educational development in Cross River State, Nigeria.

II. STATEMENT OF THE PROBLEM

Public secondary schools in Calabar Education Zone of Cross River State are expected to respond effectively to rapid changes in educational policies, technological advancements, curriculum reforms, and evolving teaching and learning practices. Educational innovation has become indispensable for improving instructional delivery, enhancing administrative efficiency, promoting learners' achievement, and ensuring the long-term sustainability of schools. However, despite the introduction of various innovations such as digital learning technologies, continuous professional development programmes, collaborative leadership approaches, and improved school management practices, many public secondary schools continue to experience challenges relating to poor implementation of innovations, inadequate

infrastructural facilities, limited financial resources, insufficient staff capacity, resistance to change, and weak monitoring and evaluation mechanisms. These challenges have contributed to declining educational quality, low teacher motivation, inadequate learner outcomes, and reduced institutional effectiveness, thereby threatening the sustainability of public secondary schools. The persistence of these problems suggests that educational innovations alone may not guarantee sustainable school development unless they are effectively managed through appropriate strategies.

Although previous studies have examined educational innovation, school leadership, change management, and school effectiveness, limited empirical attention has been given to the specific management strategies that promote the sustainability of public secondary schools within the context of Calabar Education Zone. Consequently, there is inadequate evidence on how innovation management strategies such as strategic leadership, stakeholder participation, capacity building, resource mobilization, technology integration, and effective monitoring contribute to sustaining educational improvement in public secondary schools. This gap in knowledge has created uncertainty among educational administrators and policymakers regarding the most effective approaches for managing innovations that can ensure continuous school improvement and organizational sustainability. It is against this background that this study seeks to investigate the management of educational innovation strategies for the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria.

III. LITERATURE REVIEW

Influence of Pedagogical Innovation Strategy on the Sustainability of Public Secondary Schools

Pedagogical innovation strategy refers to the systematic adoption and implementation of learner-centred instructional approaches, contemporary teaching methods, collaborative learning practices, differentiated instruction, inquiry-based learning, project-based learning, and formative assessment techniques that enhance the quality of teaching and learning. Sustainable public secondary schools are those capable of maintaining high standards of

educational quality, adapting to changing societal demands, promoting continuous improvement, and achieving long-term educational goals. The relationship between pedagogical innovation and school sustainability is grounded in the premise that effective teaching practices improve students' academic performance, strengthen teacher competence, encourage learner engagement, and enhance institutional resilience. Educational systems that continuously refine instructional practices are better positioned to respond to curriculum reforms, technological changes, and evolving labour market expectations. Consequently, pedagogical innovation has become an essential strategy for ensuring the sustainability of secondary education through improved instructional effectiveness, educational relevance, and organizational adaptability.

Scholars have consistently argued that innovative pedagogical practices contribute significantly to educational sustainability by promoting meaningful learning experiences and improving institutional performance. According to Fullan (2020), sustainable educational improvement depends largely on the continuous transformation of classroom practices rather than structural reforms alone. Similarly, Hargreaves and O'Connor (2018) maintained that collaborative professionalism encourages teachers to adopt innovative instructional strategies that improve learning outcomes and strengthen school improvement efforts. Harris (2020) further observed that schools characterized by innovative teaching cultures demonstrate greater adaptability to educational reforms and changing learner needs. In addition, Schleicher (2019) emphasized that innovative pedagogy develops critical thinking, creativity, communication, and problem-solving competencies required for sustainable development. Collectively, these perspectives indicate that pedagogical innovation enhances both instructional quality and the long-term sustainability of public secondary schools through continuous improvement in teaching and learning processes.

Influence of Technological Innovation Strategy on the Sustainability of Public Secondary Schools

Technological innovation strategy involves the effective integration of digital technologies, educational software, learning management systems,

artificial intelligence, virtual learning platforms, interactive multimedia resources, and digital communication tools into school administration and instructional delivery. The rapid advancement of educational technology has transformed the way schools manage learning, communicate with stakeholders, evaluate students, and support professional development. Sustainable public secondary schools increasingly depend on technological innovation to improve operational efficiency, expand learning opportunities, and promote equitable access to quality education. Technology facilitates flexible learning environments, enhances instructional effectiveness, supports evidence-based decision-making, and strengthens institutional capacity to withstand disruptions such as public health emergencies and other unforeseen challenges. Therefore, technology integration has become an indispensable component of sustainable educational management.

Several empirical studies have demonstrated the positive contribution of technological innovation to school sustainability. UNESCO (2023) reported that schools with well-integrated digital technologies experience improvements in teaching effectiveness, learner participation, institutional efficiency, and educational continuity. Likewise, OECD (2023) noted that technology-supported schools are better equipped to personalize learning, improve administrative effectiveness, and respond to emerging educational challenges. Ertmer and Ottenbreit-Leftwich (2019) argued that successful technology integration depends not only on the availability of digital infrastructure but also on teachers' pedagogical competence and institutional support systems. Furthermore, Trust and Whalen (2020) found that schools with strong digital leadership and continuous professional development were more capable of sustaining instructional quality during periods of educational disruption. These findings collectively suggest that technological innovation strengthens the sustainability of public secondary schools by improving instructional delivery, administrative efficiency, communication systems, and institutional resilience.

Influence of Organisational Innovation Strategy on the Sustainability of Public Secondary Schools

Organisational innovation strategy refers to the introduction of new administrative structures, leadership approaches, governance systems, collaborative decision-making processes, resource management practices, and organizational cultures that improve institutional effectiveness and adaptability. Sustainable public secondary schools require flexible organizational structures capable of responding effectively to policy reforms, stakeholder expectations, technological advancement, and changing educational priorities. Organisational innovation promotes teamwork, decentralised decision-making, staff empowerment, accountability, and continuous organizational learning. These practices strengthen institutional capacity, improve employee commitment, enhance operational efficiency, and create supportive environments for innovation. Consequently, organizational innovation represents a strategic mechanism through which school leaders promote long-term institutional sustainability and educational excellence.

Existing literature provides substantial evidence supporting the influence of organisational innovation on school sustainability. Hallinger (2020) asserted that effective leadership fosters organizational innovation by creating enabling environments that encourage collaboration, shared vision, and continuous improvement. Bush (2020) similarly emphasized that innovative organizational practices strengthen school governance, improve resource utilization, and enhance institutional effectiveness. Leithwood, Harris, and Hopkins (2020) further observed that transformational leadership encourages organizational learning, teacher commitment, and innovation, all of which contribute significantly to sustainable school development. In addition, Senge (2006) argued that learning organizations continuously adapt to internal and external changes through shared learning, systems thinking, and collaborative problem-solving, thereby sustaining organizational performance over time. These scholarly perspectives demonstrate that organisational innovation enhances the sustainability of public secondary schools by improving leadership effectiveness, institutional adaptability, stakeholder collaboration, and continuous organizational development.

This study addresses the contextual gap by providing empirical evidence on how pedagogical, technological, and organisational innovation strategies influence the sustainability of public secondary schools within Calabar Education Zone of Cross River State, where such evidence is limited. It also fills the conceptual gap by examining these three innovation strategies simultaneously within a single management framework rather than investigating them as isolated variables. Furthermore, the study bridges the methodological gap by generating current empirical data from public secondary schools that can inform research in educational policies, leadership practices, and sustainable school improvement initiatives in Nigeria.

Purpose of the study

The main purpose of this study is to examine the management of educational innovation strategies for the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria. Specifically, the study sought to:

1. Examine the influence of pedagogical innovation strategy on the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria.
2. Determine the influence of technological innovation strategy on the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria.
3. Assess the influence of organisational innovation strategy on the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria.

Research questions

The following research questions guided the study:

1. What is the influence of pedagogical innovation strategy on the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria?
2. What is the influence of technological innovation strategy on the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria?
3. What is the influence of organisational innovation strategy on the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria?

IV. METHODOLOGY

The study adopted a descriptive survey research design, which was considered appropriate for examining the influence of educational innovation strategies on the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria. The design enabled the researcher to systematically collect, analyze, and interpret data from a representative sample of school administrators and teachers, thereby facilitating valid generalizations about the target population. The target population comprised 2,486 respondents, consisting of 97 principals and 2,232 teachers from all public secondary schools in Calabar Education Zone of Cross River State. A stratified random sampling technique was employed to select a sample of 400 respondents, representing approximately 16.1% of the population. Stratification was based on respondent category (principals and teachers) and schools to ensure proportional representation across the study area, thereby enhancing the representativeness, reliability, and generalizability of the findings. Data for the study were collected using two researcher-developed instruments titled the Educational Innovation Strategies Scale (EISS) and the Public Secondary School Sustainability Scale (PSSSS). The Educational Innovation Strategies Scale (EISS) was designed to measure the dimensions of educational innovation strategies, namely pedagogical innovation strategy, technological innovation strategy, and organisational innovation strategy, while the Public Secondary School Sustainability Scale (PSSSS) measured indicators of school sustainability, including instructional effectiveness, institutional resilience, continuous school improvement, stakeholder participation, efficient resource utilization, and quality educational outcomes. Each instrument contained 30 items developed in line with the objectives of the study and relevant literature. To establish content and construct validity, the instruments were subjected to expert scrutiny by three specialists in Educational Management, Measurement and Evaluation, and Curriculum Studies. Their observations and recommendations guided the revision of ambiguous items, improved the clarity of statements, and ensured adequate coverage of the study variables. A pilot study was conducted using 20 principals and teachers drawn from public secondary schools outside Calabar

Education Zone who possessed characteristics similar to those of the study population. Data obtained from the pilot study were analyzed using Cronbach's Alpha to determine the internal consistency of the instruments. The reliability coefficients obtained were 0.86 for the Educational Innovation Strategies Scale (EISS) and 0.89 for the Public Secondary School Sustainability Scale (PSSSS), indicating that both instruments possessed high reliability and were suitable for the study. The instruments were organized into three sections. Section A elicited respondents' demographic information; Section B measured educational innovation strategies; while Section C assessed the sustainability of public secondary schools. The questionnaires were administered through both hard-copy and electronic formats to maximize accessibility and improve response rates. With the assistance of trained research assistants, the instruments were distributed and retrieved across the selected public secondary schools over a period of four weeks. Out of the 400 questionnaires administered, 385 were properly completed and returned, representing a 96.3% response rate, which was considered adequate for data analysis. Responses were rated on a four-point Likert scale of Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1). A criterion means of 2.50 was adopted as the benchmark for decision-making. Mean scores of 2.50 and above indicated a high level of educational innovation strategies and sustainability of public secondary schools, whereas mean scores below 2.50 indicated a low level. Data generated from the study were analyzed using mean and standard deviation to answer the research questions.

V. RESULTS

Research question one

What is the influence of pedagogical innovation strategy on the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria?

Table 1: Respondents' mean ratings and standard deviation on the influence of pedagogical innovation strategy on the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria (n = 385)

S/N	Pedagogical innovation strategy indicators	N	Mean	S.D.	Decision
1	Pedagogical innovation strategy promotes learner-centred instructional practices that enhance the sustainability of public secondary schools.	385	1.61	0.80	SD
2	Innovative teaching methods improve students' academic achievement and school sustainability.	385	1.58	0.82	SD
3	Pedagogical innovation strategy enhances teachers' instructional effectiveness in public secondary schools.	385	1.63	0.78	SD
4	Continuous improvement in teaching practices contributes to the sustainability of public secondary schools.	385	1.56	0.84	SD
5	Collaborative learning approaches promote sustainable educational outcomes in public secondary schools.	385	1.60	0.81	SD
6	Innovative classroom assessment strategies improve the quality and sustainability of secondary education.	385	1.57	0.79	SD
7	Differentiated instructional strategies enhance students' engagement and school sustainability.	385	1.62	0.77	SD
8	Pedagogical innovation strategy strengthens teachers' capacity to respond to curriculum reforms.	385	1.59	0.83	SD
9	Active learning strategies improve the quality of teaching and learning in public secondary schools.	385	1.64	0.76	SD
10	Effective pedagogical innovation contributes to the long-term sustainability of public secondary schools.	385	1.55	0.85	SD
Grand		385	1.60	0.81	SD

Source: Fieldwork, 2026

The results presented in Table 1 indicate that respondents strongly disagreed that pedagogical innovation strategy significantly influences the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria. The grand mean score of 1.60, which falls within the Strongly Disagree (SD) category, suggests a general perception that pedagogical innovation strategies have not been effectively implemented to promote the sustainability of public secondary schools. All the items recorded mean scores below the criterion mean of 2.50, indicating respondents' strong disagreement that learner-centred instructional practices, innovative teaching methods, collaborative learning, differentiated instruction, classroom assessment innovations, curriculum responsiveness, active learning strategies, and continuous improvement in

pedagogy have contributed meaningfully to sustainable school development. The standard deviation values, ranging from 0.76 to 0.85, indicate relatively low variability in respondents' opinions, reflecting a high level of consistency in their responses. Therefore, the findings imply that pedagogical innovation strategy has not exerted a substantial positive influence on the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria.

Research question two

What is the influence of technological innovation strategy on the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria?

Table 2: Respondents' mean ratings and standard deviation on the influence of technological innovation strategy on the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria (n = 385)

S/N	Technological innovation strategy indicators	N	Mean	S.D.	Decision
1	Technological innovation strategy enhances the quality of teaching and learning in public secondary schools.	385	1.58	0.81	SD
2	The integration of digital learning technologies improves the sustainability of public secondary schools.	385	1.61	0.79	SD
3	The use of educational software enhances teachers' instructional effectiveness.	385	1.56	0.84	SD
4	Technological innovation strategy promotes effective communication among school stakeholders.	385	1.63	0.77	SD
5	The use of information and communication technology improves administrative efficiency in public secondary schools.	385	1.59	0.82	SD
6	Technology integration supports continuous professional development for teachers.	385	1.57	0.80	SD
7	The availability of digital learning resources contributes to sustainable school development.	385	1.62	0.78	SD
8	Technological innovation strategy strengthens students' engagement in the teaching-learning process.	385	1.55	0.85	SD
9	The adoption of educational technologies enhances effective school management.	385	1.60	0.79	SD
10	Technological innovation strategy improves the long-term sustainability of public secondary schools.	385	1.58	0.83	SD
Grand		385	1.59	0.81	SD

Source: Fieldwork, 2026

The results presented in Table 2 indicate that respondents strongly disagreed that technological innovation strategy significantly influences the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria. The grand mean score of 1.59, which falls within the Strongly Disagree (SD) category, suggests a general perception that technological innovation strategies have not been sufficiently effective in promoting the sustainability of public secondary schools. All the items recorded mean scores below the criterion mean of 2.50, indicating respondents' strong disagreement that the integration of digital technologies, educational software, information and communication technology, digital learning resources, technology-supported professional development, effective communication systems, student engagement, and technology-

enhanced school management have contributed meaningfully to sustainable school development. The standard deviation values, ranging from 0.77 to 0.85, indicate relatively low variability in respondents' opinions, reflecting a high level of consistency in their responses. Therefore, the findings imply that technological innovation strategy has not exerted a substantial positive influence on the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria.

Research question three

What is the influence of organisational innovation strategy on the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria?

Table 3: Respondents' mean ratings and standard deviation on the influence of organisational innovation strategy on the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria (n = 385)

S/N	Organisational innovation strategy indicators	N	Mean	S.D.	Decision
1	Organisational innovation strategy promotes effective school management practices that enhance sustainability.	385	1.60	0.80	SD
2	Innovative organisational structures improve the effectiveness of public secondary schools.	385	1.57	0.83	SD
3	Organisational innovation strategy encourages collaborative decision-making among school stakeholders.	385	1.62	0.78	SD
4	Innovative leadership approaches strengthen the sustainability of public secondary schools.	385	1.55	0.85	SD
5	Organisational innovation strategy enhances effective resource utilization in public secondary schools.	385	1.59	0.81	SD
6	Organisational innovation strategy improves staff commitment and productivity towards achieving school goals.	385	1.58	0.82	SD
7	Innovative organisational practices promote accountability and transparency in school administration.	385	1.63	0.77	SD
8	Organisational innovation strategy enhances schools' ability to adapt to educational changes and reforms.	385	1.56	0.84	SD
9	Organisational innovation strategy promotes continuous improvement and quality assurance in public secondary schools.	385	1.61	0.79	SD
10	Effective organisational innovation contributes to the long-term sustainability of public secondary schools.	385	1.58	0.83	SD
Grand		385	1.59	0.81	SD

Source: Fieldwork, 2026

The results presented in Table 3 indicate that respondents strongly disagreed that organisational innovation strategy significantly influences the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria. The grand mean score of 1.59, which falls within the Strongly Disagree (SD) category, suggests a general perception that organisational innovation strategies have not been adequately implemented to promote sustainable development in public secondary schools. All the items recorded mean scores below the criterion mean of 2.50, indicating respondents' strong disagreement that innovative organisational structures, collaborative decision-making, leadership approaches, resource utilization practices, accountability mechanisms, staff commitment strategies, adaptability measures, and quality assurance practices have contributed significantly to school sustainability. The standard deviation values, ranging from 0.77 to 0.85, indicate relatively low

variability in respondents' opinions, reflecting a high level of consistency in their responses. Therefore, the findings imply that organisational innovation strategy has not exerted a substantial positive influence on the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria.

VI. DISCUSSION OF FINDINGS

The first finding revealed that respondents strongly disagreed that pedagogical innovation strategy significantly influences the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria. This finding disagrees with the position of Fullan (2020), who argued that sustainable educational improvement depends largely on continuous transformation of teaching practices, instructional innovation, and the capacity of schools to adapt to emerging educational demands. Similarly, Hargreaves and O'Connor (2018) emphasized that

collaborative professionalism among teachers promotes innovative pedagogical practices that enhance learning outcomes and strengthen school improvement efforts. The divergence between the present finding and previous studies may be attributed to contextual differences, particularly the challenges confronting public secondary schools in the study area, such as inadequate instructional resources, limited professional development opportunities, and weak implementation structures for innovative teaching practices. The novelty of this finding lies in demonstrating that the mere existence or awareness of pedagogical innovation strategies does not automatically translate into sustainable school development unless such innovations are effectively managed, adequately supported, and institutionalized within the school system. Thus, this study extends existing knowledge by highlighting the importance of implementation capacity and contextual readiness as critical conditions for pedagogical innovation to contribute to school sustainability.

The second finding indicated that respondents strongly disagreed that technological innovation strategy significantly influences the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria. This finding contradicts the assertions of Ertmer and Ottenbreit-Leftwich (2019), OECD (2021), and UNESCO (2023), who established that effective integration of educational technologies improves teaching effectiveness, expands learning opportunities, enhances administrative efficiency, and strengthens institutional resilience. However, the present finding provides a context-specific perspective by suggesting that technological innovation may have limited sustainability outcomes where schools experience inadequate digital infrastructure, poor internet connectivity, insufficient teacher digital competence, and limited institutional support. While previous studies have largely emphasized the transformative potential of technology in education, this study contributes a novel dimension by revealing that technological innovation strategies require supportive organizational conditions, funding mechanisms, and capacity-building initiatives before they can effectively enhance sustainable school development. Therefore, the finding emphasizes that technology should not be viewed as an independent solution to educational challenges but as a strategic

resource whose impact depends on effective management and utilization.

The third finding showed that respondents strongly disagreed that organisational innovation strategy significantly influences the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria. This finding differs from the views of Bush (2020), Hallinger (2020), Leithwood, Harris, and Hopkins (2020), and Senge (2006), who maintained that innovative leadership, organizational learning, collaborative decision-making, and adaptive structures are essential for sustaining educational institutions. The difference may be explained by the realities of public secondary schools in the study area, where bureaucratic constraints, limited autonomy, inadequate stakeholder involvement, and weak change management practices may hinder the effective adoption of organizational innovations. The present study contributes new empirical evidence by establishing that organizational innovation strategies may not produce sustainability outcomes when school structures and leadership systems are not sufficiently prepared to support innovation. Consequently, the study advances the literature by emphasizing that sustainable secondary education requires not only the introduction of innovative organizational practices but also deliberate efforts to strengthen leadership capacity, institutional flexibility, and a culture of continuous improvement.

VII. CONCLUSION

The study concludes that pedagogical, technological, and organisational innovation strategies have not significantly influenced the sustainability of public secondary schools in Calabar Education Zone of Cross River State, Nigeria, based on respondents' perceptions. The findings suggest that the effectiveness of educational innovations depends largely on proper implementation, adequate resources, supportive leadership, and institutional readiness. Therefore, achieving sustainable public secondary education requires deliberate efforts to strengthen the management and application of innovation strategies within schools.

VIII. RECOMMENDATIONS

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

1. Public secondary school principals should strengthen the implementation of pedagogical innovation strategies through regular teacher training, instructional supervision, and professional development programmes that equip teachers with modern teaching approaches, learner-centred methods, and innovative assessment techniques for sustainable educational improvement.
2. Government and relevant educational authorities should provide adequate technological infrastructure, digital resources, and continuous ICT capacity-building programmes for teachers and school administrators to enhance the effective integration of technology into teaching, learning, and school management processes.
3. School leaders should promote organisational innovation strategies by creating flexible administrative structures, encouraging stakeholder participation, improving collaborative decision-making, and developing a culture of continuous improvement that supports the sustainability of public secondary schools.

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