

ADVANCING INSTRUCTIONAL QUALITY IN PUBLIC SENIOR SECONDARY SCHOOLS THROUGH THE 21ST CENTURY CLASSROOM MANAGEMENT STRATEGIES IN RIVERS STATE, NIGERIA

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ABSTRACT

This study investigated issues surrounding the advancement of instructional quality in public senior secondary schools through the 21st century classroom management strategies in Rivers State, Nigeria. The study adopted the descriptive survey design. The study had four research questions with four corresponding null hypotheses. The population of the study was all the 5,833 teachers of the 333 public senior secondary schools in Rivers State. The sample of the study was 300 teachers comprising of 180 male teachers 120 female teachers. Stratified and simple random sampling techniques were employed to select the respondents. The instrument for data collection was a questionnaire constructed by the researcher and titled: Modern Classroom Management Strategies for Quality Instructional Delivery Questionnaire (MCMSQIDQ). The reliability coefficient of the instrument was .89, determined using Pearson's Product Moment Correlation statistics. The research questions were answered using mean and standard deviation statistics while the null hypotheses were tested using independent t-test. Statistical Package for Social Sciences (SPSS) Version 25 was used for the analysis. The study found how 21st century classroom management strategies such as student-centred approach, technology integration, active learning, and collaborative learning practices. It was further found that there was no significant difference in the mean ratings of male and female teachers on how the various 21st century classroom management practices can be implemented for quality instructional delivery in public senior secondary schools in Rivers State. The study recommended among others that teachers should make a total paradigm shift from traditional ways of managing classrooms to innovative and more contemporary ways to boost the effectiveness of the instructional delivery processes of their schools.

Keywords: Innovation, Classroom Management, Technology Integration, Student-Centred Instruction, Instructional Goal.

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INTRODUCTION

Classroom management is arguably one of the most frequently discussed subject matters in school administration literatures. This is probably because the classroom comes through as the most important unit of the school system, given the fact that it is in the classroom that the most important business of the school, which is teaching and learning (otherwise referred to as instructional delivery) takes place. It is in the classroom that teachers and students, who are the two most critical stakeholders of the school system, meet and interact to achieve the goals and objectives of education at any given level of education in the country. Classroom management, which refers to the process whereby teachers employ strategies, techniques, and systems to create and maintain a productive, respectful, and safe learning environment for the attainment instructional goals, therefore becomes a major concern of critical stakeholders of public senior secondary schools in Rivers State, even as it is the soul of effective teaching and learning at this level of education in the state.

Importantly, the effectiveness of the instructional delivery process is measured by, among other indices, the extent to which the process responds to and meets students' learning needs (Lynnette et al., 2021; Jekayinfa et al., 2023). The learning needs are often captured in the instructional curriculum. The curriculum itself, which is a blueprint of the learning experiences that are expected to be transferred from teachers to learners, is continually being reformed or amended to meet the ever-changing needs of the society. Hence, the need for continuous innovation in the implementation process of the curriculum. This therefore warrants continuous innovation in classroom management practices, too. As such, the study seeks to explore innovative practices in classroom management for quality instructional delivery in public senior secondary schools in Rivers State.

In recent times, the outcomes of the instructional delivery processes of public senior secondary schools in Rivers State have raised serious concerns among stakeholders regarding the effectiveness and quality of what is going on in the classrooms of these schools. Shadows of doubts are being cast on the appropriateness of the classroom management practices that are being adopted by the teachers, especially as the outcomes of the instructional process do not suggest that teachers have been able to be creative and innovative enough in the management of their classrooms to respond to the changing needs of learners warranted by changes brought about by the 21st century to the society and to the school system which is a miniature society.

While there had been various classroom management practices in times past, such as the use of disciplinary measures, instructional supervision, supportive feedback, delegation of responsibilities, seating arrangement, among others (Nwankwoala, 2021), these practices appear to have lost their efficacy in supporting students' learning, especially with the societal changes that hallmark the 21st century. The society is now more democratic than it used to be. Students' rights are now being emphasized more than ever before, and teaching and learning is now student-centred. Technology has become the order of the day. Teachers are now more of instructional facilities in the classroom unlike before when the entire instructional process appeared to revolve around them (Ololube et al., 2013b). As such, pragmatic classroom management can only be ensured through total paradigm shift from the traditional methods of managing classrooms to more innovative practices befitting of a 21st Century learning place. It is against this background that the study sought to explore the employment of innovative practices in managing classrooms for effective teaching and learning in public senior secondary schools in Rivers State.

Statement of the Problem

Instructional delivery, which encompasses all teaching and learning processes and activities that happen in the classroom can hardly be said to have been effective in public senior secondary schools in Rivers State as evidenced by high level of abysmal performance of students in both internal and external summative assessments. Stakeholders from some quotas suspect that the cause of this unwholesome development is likely to be connected with the observation that teachers in these schools are still adopting traditional and obsolete methods of classroom management in a 21st century where various technologically driven and learner-centred instructions have become best practices. The need for paradigm shift in classroom management practices has therefore become one of the most frequent themes in literatures on 21st century instructional delivery, with practices such as student-centred classroom management, technology integration, active learning, collaborative learning and positive reinforcement apparently becoming the most frequently highlighted perceived effective classroom management practices that could yield desired instructional outcomes. Hence, the motivation for meticulous examination of how these practices could bring about quality instructional delivery in public senior secondary schools in Rivers State.

Aim and Objectives of the Study

The aim of the study was to explore instructional quality in public senior secondary schools through the 21st century classroom management strategies in Rivers State, Nigeria. Specifically, the study sought to:

- Determine how student-centred classroom management can be implemented as a 21st century classroom management practice for quality instructional delivery in public senior secondary schools in Rivers State;
- Investigate how technology integration can be implemented as a 21st century classroom management practice for quality instructional delivery in public senior secondary schools in Rivers State;
- Examine how active learning can be implemented as a 21st century classroom management practice can be implemented for quality instructional delivery in public senior secondary schools in Rivers State;
- Assess how collaborative learning can be implemented as a 21st century classroom management practice for quality instructional delivery in public senior secondary schools in Rivers State.

Research Questions

The study was guided by the following five research questions:

- How can student-centred classroom management be implemented as a 21st century classroom management practice for quality instructional delivery in public senior secondary schools in Rivers State?

- How can technology integration be implemented as a 21st century classroom management practice for quality instructional delivery in public senior secondary schools in Rivers State?
- How can active learning be implemented as a 21st century classroom management practice for quality instructional delivery in public senior secondary schools in Rivers State?
- How can collaborative learning be implemented as a 21st century classroom management practice for quality instructional delivery in public senior secondary schools in Rivers State.

Hypotheses

The following null hypotheses were raised and tested at a significance level of 0.05 to guide the study:

- There is no significant difference in the mean ratings of male and female teachers on how student-centred classroom management can be implemented as a 21st century classroom management practice for quality instructional delivery in public senior secondary schools in Rivers State.
- There is no significant difference in the mean ratings of male and female teachers on how technology integration can be implemented as a 21st century classroom management practice for quality instructional delivery in public senior secondary schools in Rivers State.
- There is no significant difference in the mean ratings of male and female teachers on how active learning can be implemented as a 21st century classroom management practice for quality instructional delivery in public senior secondary schools in Rivers State.
- There is no significant difference in the mean ratings of male and female teachers on how collaborative learning can be implemented as a 21st century classroom management practice for quality instructional delivery in public senior secondary schools in Rivers State.

THEORETICAL FRAMEWORK

This study is anchored in the self-determination theory propounded by Richard Ryan and Edward Deci in the 1980s as cited in Nishimura and Joshi (2021). The self-determination theory (SDT) postulates that, it is human nature to be active and curious, to want to acquire new knowledge and skills, and to connect with others if and only if they are in a supportive environment. In other words, when humans (students in this regard) find themselves in a supportive learning environment, they naturally become active and curious in a bid to acquire new knowledge, develop strategies to do so, and to connect with others (socialize with other members of the school community like fellow students and teachers).

The self-determination theory is a theory that focuses on humans' intrinsic (inner or internal, self-driven) motivations to learn and develop themselves, and the theory seeks a way to support them to be more motivated and achieve better outcomes and well-being. The key feature of SDT is a sequence of events starting with support for students' autonomy and proceeding to final outcomes via the satisfaction of students' basic needs, and motivation internalization

(Nishimura & Joshi, 2021). Three sequential events can be identified in this theory: (1) autonomy support from teachers or parents satisfies the basic psychological needs of a student; (2) basic psychological needs satisfaction contributes to an increase in the student's perceived competence and the internalization of the student's motivation; and (3) internalized motivation results in higher academic achievement (Nishimura & Joshi, 2021).

The self-determination theory is relevant to this study as it highlights the three core factors upon which students' learning motivation in the classroom depends: autonomy, competence, and relatedness. Satisfying students' needs along this line of motivation is what 21st century classroom management is all about. That is the doctrine of student-centredness. The theory emphasizes the fact that when the school environment, and especially the classroom is made conducive and supportive of students learning through modern classroom management strategies, students become motivated towards learning and seek to connect with members of the classroom in the teaching-learning process. The theory thus highlights the need for teachers and parents to support students' autonomy or freedom to learn in the way that is most convenient for them or to have a sense of control over their own learning strategies, provide resources that meet their basic learning needs so that they are able to feel effective in achieving desired learning outcomes, and to create a socially positive climate where students feel connected and valued by others. In so doing, teachers and school administrators may be able to create learning environments that promote intrinsic motivation, engagement, and students' well-being, which are crucial for effective attainment of education goals in the school.

CONCEPTUAL REVIEW

Classroom Management

Classroom management refers to the orderly and professional arrangement and coordination of classroom activities in order to provide an environment conducive for teaching and learning (Owan cited in Nwankwoala, 2021). It is the application of the principles of management, which include planning, organizing, directing, coordinating, and controlling (Ogwunte et al., 2022) to the business of the classroom. Classroom in this regard refers to the venue of instructional delivery where teachers meet and interact with learners for the purpose of impacting knowledge. Nwankwoala (2018) described the classroom as the physical venue purposefully designed for the interaction of teachers, learners, and a curriculum; the curriculum being a body of knowledge of instructional experiences that are to be passed from the teacher and instructional materials to the learners (Adio et al., 2021; Alsubaie, 2016). Ahmad et al. (2017) opined that classroom management procedures assume an indispensable part in upgrading learners' learning. Again, Nwankwoala (2018) defined classroom management as all the efforts the classroom teacher puts using the available human and material resources in the classroom to achieve set educational objectives and goals. These set objectives and goals become what are translated into the learning experiences contained in the curriculum to be delivered in the classroom.

Classroom management is a significant part of effective teaching and learning process. Due to an effective classroom management, students flourish in a positive class climate and a compassionate environment. From a students' perspective, effective classroom management provides them the opportunities to socialize themselves while learning. From a teacher's perspective, effective classroom management involves precautionary discipline and fruitful

teaching. Furthermore, classroom management is the process of organizing and conducting the business of the classroom.

21st Century Classroom Management Practices

Traditionally, classroom management was perceived as the preservation of order through teacher control (Abdulkareem, 2018; Nwankwoala, 2021; Nwankwoala, 2018; Wadi, 2018). 21st century education focus as however altered this perspective. In the context of 21st century learning, classroom management now involves the establishment and maintenance of the classroom environment so that educational goals can be accomplished (Savage & Savage cited in Tahir et al., 2019). As such, several contemporary and innovative practice have been proposed in literature, some of which include: student-centred learning approach, integration of technology into the instructional delivery process, empathetic leadership, active learning, collaborative learning, use of positive reinforcement, gamification, among others (Ololube et al., 2013; Gacheri, 2022; Kizlik, 2019; Mayeski, 2020; Nwonkwo & Chika, 2020; Tahir et al., 2019). The present study focuses on student-centred approach, technology integration, collaborative learning and positive reinforcement.

Quality Instructional Delivery

Instructional delivery is a generic term for the process of teaching and learning in the classroom. Quality instructional delivery is about effectiveness of the instructional delivery process. The process is said to be effective if it achieves its purpose. This requires that teachers are able to teach effectively and efficiently and students, too, are able to learn appropriately, culminating in improved performance of students and impressive learning outcomes. This is made possible when instructional conditions are favourable. Favourability of instructional conditions according to Nwankwoala (2018) depends on several factors among which are: the class size, availability of instructional materials, conducive learning environment, students-friendly instructional methodology, positive classroom climate, etc. The end product of quality instructional delivery is often desirable students' outcome in the form of their academic performance in assessments.

Lumpkin (2020) averred that quality instructional delivery is achieved through five sequential steps taken by the teacher. Step one involves the teacher previewing the design of the course's disciplinary content. In step two, the teacher communicates information clearly and specifically to convince and command the listening and learning attention of students. In step three, the teacher leads interactive classes utilizing a variety of instructional approaches interspersed with engaging learning activities. In step four, the teacher reinforces and strengthens learning through the use of a variety of learning assessments. In step five, students take actions by using knowledge and skills learnt. In combination, these five sequential steps facilitate effective teaching and strengthen learning.

Influence of the Application of 21st Century Classroom Management Practices on Instructional Outcomes

The 21st century classroom management practices are essential for improving the quality of instructional delivery in secondary schools in Nigeria. These practices focus on creating a student-centered learning environment, promoting active learning, and using technology to

enhance instruction. Literature has highlighted five cardinal ways the application of 21st century classroom management practices can improve the quality of teaching and learning in schools (Bayefa-Asaowei, 2024; Mogboh et al., 2022). These ways include:

1. *Improved student engagement*: Making students the centre of instruction, providing them with technology resources, and supporting them all round in the instructional delivery process have a way of bringing about student engagement and motivation in learning, which is a prerequisite condition for improved instructional outcomes.
2. *Enhanced instructional delivery*: The application of 21st century classroom management practices also improves the quality of the teaching and learning process. It creates a positive and collaborative learning atmosphere for teachers and students alike.
3. *Better classroom management*: Application of 21st century classroom management practices brings about improved classroom management and reduced disruptions.
4. *Increased student achievement*: This is as a matter of fact the most important goal of 21st century classroom management practice application. The school system exists to the purpose of the students, and students' performance is rightly used to judge the performance of teachers and administrators. The right application of 21st century management practices would bring about increased student achievement and academic performance.
5. *Preparation for the Future*: The application of 21st century classroom management practices also prepares students for success beyond the walls of the classroom and the school system. It prepares students for success in the 21st century.

Application of Student-Centred Classroom Management Practice for Quality Instructional Delivery

Student-centred approach of classroom management is an innovative classroom management practice of empowering students to take ownership of their learning. This approach takes the focus away from the teacher and places it on learners, knowing that the learners are the reason for which the school exists in the first place. The needs, interest and experiences of students are prioritized. Active learning, where students take ownership of their own learning process, and the teacher acts as a facilitator or coach is the main tenet. It is unlike the lecture teaching method (teacher-centred approach) which has been found to have negative impact on subject teaching and learning (Fufa, 2023; Luka, 2018), and consistently makes students passive rather than active learners, decreases interest and does not promote insightful learning and long-term retention (Ezurike et al., 2020).

Dipu (2020) described student centred Students-Centred Pedagogy (SCP) as a student-centred approach that provides students with personalised pedagogical methods and an appropriate learning environment, allowing students to become self-directed learners (Dipu, 2020). SCP has been extolled as a gold standard or best practise in educational discourse worldwide (Bremner et al., 2023). The key principles of student-centred classroom management approach include:

- Student autonomy: This involves encouraging students to take responsibility for their learning.
- Active learning: This is about engaging students in hands-on, minds-on activities.

- Personalized learning: The teacher tailors instruction to meet individual students' needs.
- Inquiry-based learning: This involves encouraging students to explore and investigate questions and topics.
- Collaborative learning: This involves fostering student-student and student-teacher collaboration.
- Flexible pacing: This is about allowing students to work at their own pace.
- Real-world connections: By this approach, learning is related to real-life scenarios and applications.
- Ongoing feedback: This involves providing continuous feedback to guide student progress.

Student-centred teaching aims to develop: critical thinking and problem-solving skills; creativity and innovation; communication and collaboration skills; self-directed learning and time management skills; and deeper understanding and retention of content (Fufa et al., 2023).

Application of Technology Integration Classroom Management Practice for Quality Instructional Delivery

Technology integration as a classroom management practice is about the digitalization of the classroom and the use of the digital resources to foster student engagement and for instructional delivery purposes. Petrovic (2021) asserted that digital classroom encompasses digital devices and websites ensconced in a learning environment. The idea is to equip classrooms with computers, laptops, overhead projectors, interactive whiteboards and other digital devices which capture and engage students' attention and participation in the instructional delivery process, and enhance teachers' classroom management efficiency and the productivity of the teaching and learning processes that take place in the classroom.

Ntuli and Kyei-Blankson (2013) referred to technology integration as the use of various digital and hardware tools to facilitate the process of teaching and learning in and outside the classroom. Dockstader cited in Anyanwu et al. (2022) believed that technology integration is about using computers effectively and efficiently in the general content areas to allow students to learn how to apply computer skills in meaningful ways. Similarly, Kafyulilo (2015) maintained that technology integration is using software supported by the business world for real-world applications, so students learn to use computers flexibly, purposefully, and creatively. Belland (2019) believed that technology integration means using technology to make learning more efficient or effective as well as the use of technology to help students solve problems.

The fact that senior secondary school students rightly fall within the age bracket of digital natives makes the integration of technology into classroom processes a veritable approach to classroom management. Hardly is there any instructional aid that catches and engages students' attention and gives them the opportunity to interact, participate and engage with classmates and teachers as much as computers and their accessories do. Teachers, too, are able to carry out lesson planning, teach, assess students, provide feedback and develop their instructional delivery practices through instructional technologies. Hence, the integration of digital technology into instructional delivery processes in the classroom promises to be an effective innovative classroom management practice for quality education delivery in secondary education in Nigeria.

Application of Active Learning Classroom Management Practice for Quality Instructional Delivery

Active learning is a participatory instructional approach that combines both theory and practice, ensuring that the students are actively involved in the knowledge management process in the classroom. According to Mohammed and Al-hassan (2023, p.1), it is a pedagogical method that concentrates not only on what learners are learning, but also on how they learn. Studies has shown that the transmission of understanding is not achievable by simply telling students what they need to know (Araujo & Slomski, 2015). As a matter of fact, classroom management objectives, such as control, coordination, effective learning and others, are best achieved when students are made to actively get involved in the activities happening in the class. Thus, in an active learning environment, instead of passively receiving information from the teacher, students are empowered to build in-depth understanding and knowledge in response to chances provided to them (Araujo & Slomski, 2015; Cambridge Assessment cited in Mohammed & Al-hassan, 2023). Active learning requires that students must talk, collaborate, write, reflect, present, problem-solve, and transfer new information (Mohammed & Al-hassan, 2023).

Active learning concept originates from the theory of constructivism, which emphasizes that students build their own knowledge and understanding via social interaction and by connecting new notions and experiences to finding knowledge (Bransford et al. cited in Mohammed & Al-hassan, 2023). There are tons of advantages from implementing active learning strategies inside the classroom. Active learning techniques assist drive learner motivation that moderate's attention and memory consolidation (Cavenagh cited in Mohammed & Al-hassan, 2023). Active learning techniques positively contribute towards students' emotional health in many ways such as increased interest, creativity, motivation to prepare, as well as appreciation for learning (Owens et al. cited in Mohammed & Al-hassan, 2023). In addition, involving boosting skills, enhanced critical thinking competences, higher knowledge and information retention; improved interpersonal skills, implementation of knowledge to new contexts. Active learning promotes a level of intimate understanding that empowers and encourages students. Also, active learning experiences lead to raise levels of students' growth and achievement (Carr et al., 2016).

Some manifest advantages of active learning classroom management approach were highlighted by Mohammed and Al-hassan (2023) to include: it ensures that students actively participate in the learning process in the classroom; it maximizes students' chance in discussion and participation; it creates friendly learning situation; it enhances the chance of asking rather than giving explanation; It boosts opportunities for the students talking time; it increases students' motivation through several topics which are relevant to them; fostering learners' creativity through authentic tasks; giving students more encouragement and positive feedback; promoting communicative skills and interaction through many tasks (e.g: group work, pair work, speaking, discussion activity, role play, problem solving, etc.); and enhancing critical thinking and brainstorming. These are important aims sought to be achieved through the management of classrooms. As such, the adoption of active learning classroom management practices promises to be a viable innovative classroom management practice for quality instructional delivery in secondary education in Nigeria.

Application of Collaborative Learning Classroom Management Practice for Quality Instructional Delivery

Collaborative learning is an instructional approach that involves students working together to achieve a common goal or task. By this classroom management practice, the teacher emphasizes on teamwork, communication and mutual support among students and when necessary, between students and teachers, to promote learning and understanding. In a classroom that is managed through this practice, emphasis is on collaboration than on competition. Literature (Okwelle & Owo, 2018; Sada & Adamu, 2023) identified the key characteristics of collaborative learning to include: shared goals and objectives; mutual respect and trust; open communication and feedback; active learning and empathy; shared responsibility and accountability; diverse perspectives and strengths; flexibility and adaptability; and reflective thinking and problem-solving.

Collaborative instructional delivery practice in the classroom promises a lot of benefits as a classroom management practice. Some of these benefits include: Improved academic achievement, enhanced teamwork and communication skills, increased creativity and problem-solving abilities, developed critical thinking and analytical skills, improved self-esteem and confidence, enhanced sense of community and belonging, more effective use of class time and resources, and better preparation for real-world applications and challenges, among others (Sada & Adamu, 2023; Yusuf, 2024).

The practice of collaborative instructional delivery as an innovative classroom management approach could be successfully implemented through strategies such as:

- Group projects and presentations
- Peer-to-peer teaching and learning
- Brainstorming and mind mapping
- Jigsaw learning and expert groups
- Cooperative learning and team-building activities
- Problem-based learning and case studies
- Collaborative note-taking and summarizing
- Group discussions and debates (Mbonu, 2023; Sada & Adamu, 2023; Yusuf, 2024).

Through the implementation of collaborative learning strategies, teachers can create a supportive and inclusive learning environment that promotes student engagement, motivation, and academic success. Collaborative instructional delivery approach to classroom management thus becomes a viable innovative classroom management practice for quality instructional delivery in secondary education in Nigeria.

Barriers to the Effective Application of 21st Century Classroom Management Practices in Secondary Schools in Rivers State

Despite the advocacy for the adoption of 21st century classroom management processes in schools, public secondary schools are found to be far behind in making this paradigm shift. This is largely due to severe barriers which literature have identified and categorized under infrastructure and resource-related, teacher-related, student-related, policy and administrative,

and cultural and social barriers (Eya, 2020; Mogboh et al., 2022; Obulor, 2025). These are explicitly highlighted below:

- Inadequate funding: Insufficient budget allocation for education, leading to inadequate resources and infrastructure.
- Poor state of school facilities: Dilapidated buildings, overcrowding, and lack of basic amenities hinder effective classroom management.
- Limited access to technology: Inadequate computers, internet connectivity, and digital tools restrict the adoption of 21st-century classroom management practices.
- Lack of training and professional development: Teachers may not receive adequate training on modern classroom management techniques and technologies.
- Inadequate teacher motivation: Low teacher morale, poor working conditions, and inadequate incentives can hinder the adoption of new classroom management practices.
- Resistance to change: Some teachers may resist adopting new classroom management practices due to familiarity with traditional methods.
- Large class sizes: Overcrowding can make it challenging for teachers to implement modern classroom management practices.
- Diverse learning needs: Students with varying learning abilities, styles, and needs can make it difficult for teachers to adopt a one-size-fits-all approach to classroom management.
- Socio-economic challenges: Students from disadvantaged backgrounds may face challenges that affect their behaviour and engagement in the classroom.
- Inadequate education policies: Policies may not support the adoption of modern classroom management practices or provide adequate resources for implementation.
- Bureaucratic bottlenecks: Administrative processes can slow down the adoption of new classroom management practices.
- Lack of support from school administrators: School administrators may not provide adequate support or resources for teachers to implement modern classroom management practices.
- Cultural attitudes towards education: Cultural attitudes may prioritize traditional teaching methods over modern classroom management practices.
- Societal expectations: Societal expectations may emphasize rote learning and obedience over critical thinking and creativity.
- Language barriers: Language differences between teachers and students can create communication challenges that hinder effective classroom management.

METHODOLOGY

The study adopted the descriptive survey research design. The population of the study was the 5,833 teachers of the 333 public senior secondary schools in Rivers State, made up of 3,490 male teachers and 3,403 female teachers. A sample size of 300 (comprising 180 male teachers and 120 female teachers) was used for the data analysis. This sample was selected using stratified and simple random sampling techniques. The instrument for data collection was a structured questionnaire constructed by the researcher and titled: “Modern Classroom Management Strategies for Quality Instructional Delivery Questionnaire (MCMSQIDQ). The instrument was validated by two lecturers of the department of Educational Management in Ignatius Ajuru

University of Education, Port Harcourt. The reliability index of the instrument was determined using Pearson's Product Moment Correlation statistics on test-retest data obtained from a pilot study of 20 teachers from the study population who were not part of the main study. The analysis gave a reliability coefficient of .89. The response pattern of the instrument was the modified 4 points form of Likert scale rated as: Strongly Agree (SA = 4), Agree (A = 3), Disagree (D = 2), and Strongly Disagree (SD = 1). The research questions were answered using descriptive statistics of mean and standard deviation whereas the hypotheses were inferentially tested using independent samples t-test at a significance level of .05.

RESULTS

Research Question 1: How can student-centred classroom management be implemented as a 21st century classroom management practice for quality instructional delivery in public senior secondary schools in Rivers State?

Table 1: Mean ratings of male and female teachers on how student-centred classroom management can be implemented as a 21st Century Classroom Management Practice for Quality instructional delivery

s/n	Item variables	Male Teachers		Female Teachers		Mean set		Dec
		\bar{X}_1	SD ₁	\bar{X}_2	SD ₂	$\frac{\bar{X}_1 + \bar{X}_2}{2}$	SD	
1	By teachers promoting student autonomy by encouraging students to take responsibility for their learning.	3.54	.553	3.55	.554	3.55	.552	Agree
2	By teachers tailoring instruction to meet individual student's learning needs.	3.44	.551	3.48	.556	3.46	.553	Agree
3	By teachers allowing students to learn at their own pace.	3.48	.515	3.51	.530	3.49	.522	Agree
4	By teachers relating instruction to real life scenarios and applications.	3.54	.553	3.55	.554	3.55	.552	Agree
5	By teachers encourage students to explore and investigate questions and topics.	3.48	.515	3.51	.530	3.49	.522	Agree
Grand Mean		3.50	.537	3.52	.545	3.51	.540	Agree

H₀₁: There is no significant difference in the mean ratings of male and female teachers on how student-centred classroom management can be implemented as a 21st century classroom management practice for quality instructional delivery in public senior secondary schools in Rivers State.

Table 2: T-test of significant difference in the mean ratings of male and female teachers on how student-centred classroom management can be implemented practised for quality instructional delivery

Respondent's Portfolio	N	Mean	SD	t	DF	Sig.	Decision
Male Teachers	180	3.50	.421	-.385	298	.701	H ₁ Upheld
Female Teachers	120	3.52	.424				
Total	300						

Significance level of .05

Data presented in Table 1 shows that the grand mean set of the 5 examined items was $3.51 \pm .540$, which is greater than the criterion mean of 2.50. As such, majority of the respondents agreed that the items were ways student-centred classroom management could be implemented as 21st century classroom management practices for quality instructional delivery. Table 2 data further revealed that there was no significant difference in the mean ratings of male and female teachers in that regard [$t(298) = -.385, p = .701 > .05$]. The p value being greater than the significance value of .05 implies that H₀₁ was upheld.

Research Question 2: How can technology integration be implemented as a 21st century classroom management practice for quality instructional delivery in public senior secondary schools in Rivers State?

Table 3: Mean ratings of male and female teachers on how technology integration can be implemented as a 21st century classroom management for quality instructional delivery

s/n	Item variables	Male Teachers		Female Teachers		Mean Set		Dec.
		\bar{X}_1	SD ₁	\bar{X}_2	SD ₂	$\bar{X}\bar{X}$	SD	
6	Providing computers and laptops in classrooms for students learning and engagement.	3.53	.541	3.55	.541	3.54	.541	Agree
7	Equipping classrooms with overhead projectors to engage students' attention during instruction.	2.50	.529	2.49	.529	2.50	.528	Agree
8	Providing access to internet facilities in classroom to help teachers and students access online information,	2.79	.444	2.79	.445	2.71	.444	Agree
9	Providing interactive whiteboards in classrooms to increase visibility of what the teacher is teaching.	2.50	.554	2.51	.556	2.50	.554	Agree
10	Digitalizing classrooms to give students a 21 st century access to instruction.	3.05	.638	3.03	.611	3.04	.624	Agree
Grand Mean		2.87	.543	2.87	.536	2.86	.537	Agree

H₀₂: There is no significant difference in the mean ratings of male and female teachers on how technology integration can be implemented as a 21st century classroom management practice for quality instructional delivery in public senior secondary schools in Rivers State.

Table 4: T-test of significant difference in the mean ratings of male and female teachers on how technology integration can be implemented as 21st century classroom management practice for quality instructional delivery

Gender	N	Mean	SD	t	DF	Sig.	Implication
Male Teachers	180	2.872	.256	.010	298	.992	H ₀₂ Upheld
Female Teachers	120	2.871	.240				
Total	300						

Significance level of .05

The data in Table 3 reveals that the grand mean rating of the examined items was $2.86 \pm .537$. Since this value is greater than the criterion mean of 2.50, it means majority of the respondents agreed that the items were ways technology integration could be implemented as 21st century classroom management practice for quality instructional delivery. Table 4 further revealed that there was no significant difference in mean ratings of male and female teachers in that regard [$t(298) = .010, p = .992 > .05$]. Since p is greater than the significance level value, H₀₂ was upheld.

Research Question 3: How can active learning be implemented as a 21st century classroom management practice for quality instructional delivery in public senior secondary schools in Rivers State?

Table 5: Mean ratings of male and female teachers on how active learning can be adopted as an innovative practice in classroom management for quality instructional delivery

s/n	Item variables	Male Teachers		Female Teachers		Mean set		Dec.
		\bar{X}_1	SD ₁	\bar{X}_2	SD ₂	$\bar{X}\bar{X}$	SD	
11	Teacher ensures that all students actively participate in the instructional delivery process.	3.54	.553	3.55	.554	3.55	.552	Agree
12	Teacher makes the instruction to be practical-oriented.	3.44	.551	3.48	.556	3.46	.553	Agree
13	Students are made to create and communicate solutions to problems.	3.48	.515	3.51	.530	3.49	.522	Agree
14	Students are made to collaborate to produce knowledge.	3.54	.553	3.55	.554	3.55	.552	Agree
15	Students are made to learn through experience and this internalizes the knowledge gained.	3.48	.515	3.51	.530	3.49	.522	Agree
Grand Mean		3.50	.537	3.52	.545	3.51	.540	Agree

H₀₃: There is no significant difference in the mean ratings of male and female teachers on how active learning can be implemented as a 21st century classroom management practice for quality instructional delivery in public senior secondary schools in Rivers State.

Table 6: T-test of significant difference in the mean ratings of male and female teachers on how active learning can be implemented as 21st century classroom management practice for quality instructional delivery

Respondent's Portfolio	N	Mean	SD	t	DF	Sig.	Decision
Male Teachers	180	3.50	.421	-.385	298	.701	H ₀₃ Upheld
Female Teachers	120	3.52	.424				
Total	300						

Significance level of .05

The data in Table 5 revealed that the grand mean set of the five examine items was $3.51 \pm .540$. Since this value is greater than the criterion mean, it implies that majority of the respondents agreed to the items as ways active learning can be adopted as an innovative practice in classroom management for quality instructional delivery in public senior secondary schools in Rivers State. Table 6 further revealed there was no significant difference in the mean ratings of male and female teachers in that respect, with the null hypotheses being upheld [$t(298) = -.385$, $p = .701 > .05$].

Research Question 4: How can collaborative learning be implemented as a 21st century classroom management practice for quality instructional delivery in public senior secondary schools in Rivers State.

Table 7: Mean ratings of male and female teachers on how collaborative learning can be implemented as a 21st Century Classroom Management Practice for Quality instructional delivery

s/n	Item variables	Male Teachers		Female Teachers		Mean set		Dec.
		\bar{X}_1	SD ₁	\bar{X}_2	SD ₂	$\frac{\bar{X}_1 + \bar{X}_2}{2}$	SD	
16	Assigning students to work in groups on projects that require collaboration for quality instructional delivery.	3.54	.553	3.55	.554	3.55	.552	Agree
17	Encouraging students to teach each other, promoting peer-to-peer learning.	3.44	.551	3.48	.556	3.46	.553	Agree
18	Using real-world problems to facilitate collaborative learning	3.48	.515	3.51	.530	3.49	.522	Agree
18	Organizing debates were students fall into groups	3.54	.553	3.55	.554	3.55	.552	Agree
20	Dividing students into small groups and assigning each group a specific task or topic to work on.	3.48	.515	3.51	.530	3.49	.522	Agree
Grand Mean		3.50	.537	3.52	.545	3.51	.540	Agree

H₀₄: There is no significant difference in the mean ratings of male and female teachers on how collaborative learning can be implemented as a 21st century classroom management practice for quality instructional delivery in public senior secondary schools in Rivers State.

Table 8: T-test of significant difference in the mean ratings of male and female teachers on how collaborative learning can be implemented as 21st century classroom management practice for quality instructional delivery

Respondent's Portfolio	N	Mean	SD.	t	DF	Sig.	Decision
Male Teachers	180	3.50	.421	-.185	298	.801	H ₄ Upheld
Female Teachers	120	3.52	.424				
Total	300						

Significance level of .05

Data presented in Table 7 shows that the grand mean set of the 5 examined items was $3.51 \pm .540$, which is greater than the criterion mean of 2.50. As such, majority of the respondents agreed that the items were ways collaborative learning could be implemented as 21st century classroom management practices for quality instructional delivery. Table 8 data further revealed that there was no significant difference in the mean ratings of male and female teachers in that regard [$t(298) = -.185$, $p = .801 > .05$]. The p value being greater than the significance value of .05 implies that H₀₄ was upheld.

DISCUSSION OF FINDINGS

Implementation of Student-Centred Classroom Management as a 21st Century Classroom Management Practice for Quality instructional delivery

The study in this regard found that student-centred classroom management innovation could be implemented through: promoting student autonomy by encouraging students to take responsibility of their learning; tailoring learning to meet individual student's learning need; allowing students to learn at their own pace; relating instruction to real life scenarios and applications and encouraging students to investigate questions and topics. Additionally, it was found that no significant difference existed in the two groups of respondents' opinions in this regard. These findings are in agreement with Fufa et al. (2023) who posited that student-centred classroom approach aims to help students to develop: critical thinking and problem-solving skills; creativity and innovation; communication and collaboration skills; self-directed learning and time management skills; and deeper understanding and retention of content. As such, student-centred classroom management would involve the practices of active learning, student autonomy, personalized learning, inquiry-based learning, collaborative learning, flexible pacing and real world connections (Mohammed & Al-hassan, 2023).

Implementation of Technology Integration as a 21st Century Classroom Management Practice for Quality instructional delivery

The study in this regard found that the practice of technology integration for classroom management could be carried out through: provision of computers and laptops for students' learning in the classroom, provision of overhead projectors for teaching, provision of internet facilities in the classroom, provision of interactive whiteboards for teaching and learning, and full digitalization of the classroom. It was further revealed that the two groups of respondents did not significantly differ in their opinions in this respect.

These findings are in line with the position of Ololube et al. (2013a) who averred that the extent of digitalization of instructional delivery processes in schools is now one of the key indices of the quality of education delivered in that school system, and technology-assisted instruction has become the new normal for quality teaching and quality learning. Ololube et al. (2012) also advanced the idea of digital classrooms, which are classrooms fortified with ICT gadgets such as computers, Internet connectivity, projectors, smart boards, educational soft wares, CR-ROMs, Internet data, digital Apps and tools and all necessary electronic devices that are required for the interconnection and interaction of the digital devices and the human elements of the classroom. The advantages of technology integration, which include student engagement, active learning, collaborative learning, enhanced instructional efficiency and effectiveness, reduced workload and effective management of the classroom for teachers, among others, have also been highly eulogized in literature (Nwike, 2024). As such, technology integration is considered a veritable innovative practice in classroom management for quality instructional delivery in public senior secondary schools in Rivers State.

Implementation of Active Learning as a 21st Century Classroom Management Practice for Quality instructional delivery

The study in this regard found that active learning could be innovatively used by teachers to effectively manage classrooms through: ensuring that all students actively participate in the instructional delivery process; making the instruction to be practical-oriented; making students to create and communicate solutions to problems; making students to collaborate to produce knowledge; and ensuring that students learn through experience to internalize the knowledge gained in the learning process. It was further revealed that the two groups of respondents in the study were unanimous in their opinions in this regard.

These findings agree with Mohammed and Al-hassan (2023) who averred that active learning as an instructional strategy in the classroom involves teachers making students to talk, collaborate, write, reflect, present, problem-solve, and communicate new information. According to them, this keeps students busy on instruction and creates a climate of academic positivity within the classroom which repels distraction and deviation from instructional objectives. In the same vein, the findings are in accord with the position of Bransford et al. cited in Mohammed & Al-hassan (2023) that active learning places emphasis on students building their own knowledge and understanding via social interaction and by connecting new notions and experiences to finding knowledge. Employment of active learning techniques thus proves to be a viable innovative practice in classroom management for quality instructional delivery in public senior secondary schools in Rivers State.

Implementation of Collaborative Learning as a 21st Century Classroom Management Practice for Quality instructional delivery

The results of the study in this regard revealed that collaborative learning could be implemented as a 21st century classroom management practice through: assigning students to work in groups on projects that require collaboration for quality instructional delivery; encouraging students to teach each other, promoting peer-to-peer learning; using real-world problems to facilitate collaborative learning; organizing debates where students fall into groups; and by Dividing students into small groups and assigning each group a specific task or topic to work on. The study further revealed that the male and

female teachers did not differ significantly in their opinions on the how collaborative learning could be implement as a 21st century classroom management practice for quality instructional delivery.

The findings of the study in this regard agree with researchers and authors (Okwelle & Owo, 2018; Sada & Adamu, 2023) who identified the key characteristics of collaborative learning to include, shared goals and objectives, mutual respect and trust, open communication and feedback, active learning and empathy, shared responsibility and accountability, diverse perspectives and strengths, flexibility and adaptability, and reflective thinking and problem-solving. All of these are able to happen when students work together in groups. Hence, collaborative learning is a veritable classroom management practice that ensures quality instructional delivery in a 21st century learning place.

CONCLUSION

Effective management of the classroom is central to the attainment of set goals of teaching and learning in public senior secondary schools in Rivers State. Teachers as classroom managers are expected to be creative and innovative in coming up with contemporary best practices in classroom management in response to the ever-dynamic nature of the needs of learners for quality assurance in students' learning outcomes. This necessitates a total paradigm shift from the traditional approach of classroom management to 21st century practices that guarantee continuous improvement of the instructional delivery process. In this regard, practices such as student-centred classroom management approach, technology integration with instructional processes, active learning approach, and collaborative learning approach were explored in this study and were found to be highly promising in bringing about improvement in instructional outcomes if appropriately adopted. The perceived ways of adopting these practices to guaranty optimal outcomes have thus been examined and established in the study.

Recommendations

Based in the findings of the study, the following recommendations were made:

- Principals of public senior secondary schools in Rivers State should encourage teachers to be proactively innovative in responding to students' learning needs in the classroom rather than always going by conventional classroom management approaches which add no or too little value to instructional outcomes.
- Teachers should normalize centring the instructional delivery process on students rather than on themselves to be able to continually achieve the goal of improving students' learning outcomes.
- The government should equip public senior secondary schools with ICT devices such as computers and other digital resources to foster students' engagement and instructional organization.
- The government and school communities should always partner to equip public senior secondary schools with relevant instructional resources to aid active, practical-based learning within and outside the classroom. Teachers should be provided with sufficient instructional materials to help them in better managing their classrooms.

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