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Cultivating Curiosity and Resilience: Exploring Teachers' Perspectives in Integrating Instructional Innovation for Learners' Competency Development

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Abstract. This study explores primary school teachers' perspectives on integrating technology-enhanced instructional innovations to cultivate curiosity, resilience, and learner competencies in Nigerian classrooms. Utilising an interpretative phenomenological approach, seven purposively selected teachers from a high school in Port Harcourt participated in semi-structured interviews. The findings reveal that teachers actively employ diverse strategies, such as inquiry-based learning, role-play, and digital tools, to foster cognitive, socio-emotional, and ethical growth. However, systemic barriers, including inadequate resources, infrastructural deficiencies, and limited professional development opportunities, impede the full realisation of instructional innovations. Despite these challenges, teacher agency plays a pivotal role in adapting and personalising practices to meet diverse learner needs. The study underscores the importance of differentiated instruction, collaborative learning environments, and targeted policy interventions to bridge the gap between policy aspirations and classroom realities. Sustainable integration of instructional innovation requires robust professional development, collaborative teacher networks, and infrastructural improvements, transforming classrooms into dynamic spaces that equip learners with the competencies needed for 21st-century success.

Keywords: Instructional Innovation; Teacher Perceptions; Technology-Enhanced Teaching; Learner Competency Development; Professional Development

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1. Introduction

The evolving landscape of education necessitates transformative approaches that extend beyond traditional methods to cultivate curiosity, resilience, and learner competencies. These traits are increasingly recognised as essential for lifelong learning and navigating the complexities of the 21st century (Sliwka et al., 2023; Tadajewski, 2022). Teachers play a pivotal role in creating nurturing, innovative, and responsive learning environments that foster cognitive, moral, and socio-emotional growth (Ekeh & Venketsamy, 2021). However, conventional pedagogical frameworks often fail to adequately prepare learners with essential life skills like problem-solving, adaptability, and effective communication (Fousiya & Saleem, 2024).

This study examines how teachers integrate instructional innovations to address these gaps, particularly in under-resourced Nigerian classrooms. While innovative approaches are recognised as critical for comprehensive child development (Gampala, 2023), their implementation is often hindered by systemic barriers such as limited resources, infrastructural deficiencies, and diverse learner needs (Sliwka et al., 2023). By exploring teachers' perspectives, this research aims to uncover the practical challenges and strategies for fostering curiosity, resilience, and competency development, thereby contributing to the broader discourse on quality education and sustainable instructional practices.

1.1 Study Objectives

The study aims to examine how teachers integrate instructional innovations to cultivate curiosity and resilience, contributing to learner development in under-resourced Nigerian classrooms. It seeks to uncover the multifaceted roles of teachers, effective strategies for fostering learner competencies, and the systemic challenges that hinder the implementation of innovative pedagogical approaches. Find the following research questions that guide the study.

1.2 Research Questions:

i. How do teachers conceptualise their roles in fostering competency development, including cognitive, emotional, ethical, and social dimensions, through innovative instructional methods?
ii. Which instructional practices and strategies do teachers identify as most effective in cultivating learner competencies such as curiosity, resilience, analytical thinking, and interpersonal communication?
iii. What constraints do teachers encounter when integrating innovative pedagogical approaches and creating learning spaces that support the child's total development?

2. Literature Review

In modern educational discourse, the drive for innovation is conditioned by a desire to develop learner competencies beyond academic success. However, this research primarily explores the cultivation of curiosity and resilience and investigates teachers' views on employing instructional innovations to develop both skills. In today's developing educational landscape, nurturing curiosity and resilience is essential in preparing learners to face tomorrow's challenges. The

rationale for the literature review is both theoretical and practical, bringing together key concepts underpinning the role of instructional innovation, on the one hand, as a tool for promoting learner competencies and, on the other, as a transformative force for altering teacher practice in contexts of under-resourced Nigerian schools.

Teachers offer insights on innovating instruction that engages and motivates learners. The review is deeply grounded in their experiences in the classroom, where the affordances of technology-enhanced pedagogical strategies are measured against systemic constraints. By focusing on teacher perspectives, the work shines a light on the promise and perils of bringing new instructional approaches to fruition. Such practices engage students actively and promote critical thinking while directly supporting students as they learn to cope with both academic and personal challenges in the future. With global movements in education towards more integrated, learner-centred pedagogies, understanding teacher perceptions is essential in designing professional development initiatives and policy interventions (Kibirige, 2023; Ogwazu, 2024).

The following sections explore these two overarching headings. The first highlights the impact of instructional innovation on developing learner competencies by emphasising curiosity and resilience. In addition, this section highlights the theoretical foundations behind constructivist and inquiry-based approaches. It discusses various digital tools that support these frameworks, including simulations, flipped classrooms, and collaborative online platforms. Interactive elements such as live demos and real-time coding enable students to test their skills in a controlled and constructive environment.

The second theme concerns teachers' challenges in embedding curiosity and resilience into the classroom. These barriers consist of institutional barriers, lack of infrastructural support, and the lack of synchronisation between traditional methods of lesson delivery and modern-day pedagogical needs. As such, this literature review provides a balanced critique that identifies both the transformative potential and the barriers of educational practices through the lens of both the heuristic process and potential.

As the researcher articulates this conversation, teacher perspectives about instructional innovation must be embedded in a broader conversation. Teachers are not just implementers of new technology but the agents shaping the learning environment. Based on personal experience and empirical studies, some narratives reveal an ongoing negotiation between promoting learner competencies and finding ways to work within resource limitations and administrative inertia.

Finally, this review argues that for instructional innovations to be successfully integrated, policy frameworks must be harmonised with the realities of practice in the classroom. Realising the full benefit of these innovations requires effective teacher professional development, community collaboration, and strategically targeted investment in digital infrastructure. Thus, the literature reviewed herein

neither delineates the promise of curiosity and resilience cultivation through innovative instruction nor highlights the required conditions for sustainable implementation.

2.1 Enhancing Learner Competencies Through Instructional Innovation

2.1.1 Theoretical Perspectives: Curiosity and Resilience

The study draws on the theories of Piaget, Vygotsky, and Dewey to provide a robust theoretical foundation for understanding curiosity and resilience in instructional innovation. Piaget's Theory of Cognitive Development: Piaget emphasises the importance of active exploration and hands-on learning in constructing knowledge. Curiosity emerges as a natural outcome of learners engaging with their environment, questioning assumptions, and making connections between ideas (Gross, 2020).

Vygotsky's Sociocultural Theory: Vygotsky highlights the role of social interactions in learning, suggesting that curiosity is cultivated through collaborative activities and guided discovery. Resilience develops as learners navigate challenges within their zone of proximal development, supported by teachers and peers (Abate et al., 2024). Dewey's Experiential Learning Theory: Dewey advocates for contextualised, experiential learning that integrates real-world challenges into the classroom. Resilience is fostered through iterative problem-solving and reflection, enabling learners to adapt and grow from their experiences (Abate et al., 2024). Integrating these theoretical perspectives, the study underscores the transformative potential of instructional innovation in fostering curiosity and resilience, essential competencies for thriving in the 21st century's unpredictable and non-linear world.

Two pillars of knowledge have historically informed the understanding of how transformative teaching can enable learner capabilities: constructivism and inquiry-based pedagogy. Such frameworks suggest that knowledge is constructed through active exploration and hands-on experiences provided to each learner. For example, rather than the restrictions of interactive pedagogical tools, digital simulations, problem-based learning, and virtual laboratories, not only are they not a mere accompaniment, but they also define environments where open-ended exploration inherently elicits curiosity and is the start of an iterative period of discovery (Damaševičius & Sidekerskienė, 2024; Ekeh & Venketsamy, 2021). Touted as a way to encourage engagement and on-task behaviour, the success of these strategies often depends on the level of curriculum integration with digital tools, suggesting that technology alone is not enough to facilitate engagement (Abuznada, 2024; Zbereanu, 2024).

Contributing to the thoughts of hands-on activities, Piaget, Vygotsky, and Dewey argue that learning should be contextualised and active. From those perspectives, curiosity emerges as a byproduct of learning and a precursor to deep cognitive engagement. Learners with curious minds are claimed to question assumptions, go for deeper understanding, and make new connections between ideas (Gross, 2020). By designing learning experiences using an inquiry-based approach, teachers can integrate digital tools tailored to allow learners to ask questions and try out hypotheses and varying outcomes as they engage with content (Abuznada,

2024; Gross, 2020). Research has shown that students exposed to these more dynamic and interactive environments can improve overall academic performance by as much as 20-30% (Tarigan, 2023; Zbereanu, 2024), on average, compared with more traditional, lecture-based paradigms.

At the same time, these learning environments are designed to push students to apply their knowledge so that they are put in positions to fail, failures that are part of a constructive learning process. It is in moments of adversity that the most substantial resilience is developed. Arguably, resilience comes from when learners experience failure and are forced to adapt their approaches to find success from iteration and feedback and reflect on themselves by continuing this process of coming across a challenge, facing it, and if in failing, reflecting and learning from the experience, a learner makes incremental steps towards meeting future challenges and by embedding a way of thinking about grit and growth (Abate, et al. 2024). Others argue that introducing these iterative learning methods leads to long-term advantages, such as improved problem-solving skills and an increased tolerance for academic and real-world stressors.

When instructional innovation is stripped down to its dual essence of curiosity and resilience–curiosity that enables the initial 'high' and resilience that keeps us 'high', the literature presents an intrinsic model for what we need today to navigate our unpredictable, non-linear world (Abate, et al. 2024; Gross, 2020). However, the positive impact of significant interest is a one-size-fits-all path to success that will be replicated universally or considerably moderated by variables of culture, teacher quality, and resources. These debatable claims challenge future empirical studies to delineate the conditions under which digital and inquiry-based learning methods most effectively contribute to cognitive development and the socio-emotional scaffolding needed for life-long learning (Damaševičius & Sidekerskienė, 2024; Fousiya & Saleem, 2024).

2.1.2 Digital Innovations in Classroom Practice

Educational technology is a significant part of this change, transforming how teachers envision and implement instructional innovation in a classroom. Models like blended learning, flipped classes, or gamification have restructured traditional pedagogical models. For example, flipped classrooms, in which the content delivered in lecture is provided outside the school environment (and sometimes, in fact, outside the school day) through digital media, enable teachers to use the school day for collaborative and reflective learning experiences. A relation was found between this new instruction paradigm and better learner curiosity, leading to students being submerged and directly involved with the material and content presented in active learning spaces (Lombardi, 2021). Furthermore, educators have indicated that these innovations encourage resilience by allowing a safe learning place after stepping outside the box.

Technological tools, including interactive whiteboards, virtual laboratories, and mobile learning applications, provide platforms for enabling experiential learning. In the case of digital game-based learning scenarios, real-time challenges are posed to learners that might replicate multifaceted, real-world problems. This

creates curiosity through unexpected situations and builds resilience as learners face disappointment and learn to innovate their strategy to adapt to in-game settings (Abate et al., 2024; Gross, 2020). Research shows these methods foster a learning environment that promotes peer interaction and collaborative problem-solving (Abate et al., 2024; Gross, 2020). Educators have noted a more thoughtful injection of teaching innovations into the curriculum, which increases learners' analytical thinking, communication, and engagement (Abuznada, 2024; Puteri & Alfiansyah, 2023).

2.1.3 Theory-based Empirical Evidence and Case Studies

Through a solid body of empirical research, instructional innovations effectively promote a range of learner competencies, including curiosity and grittiness. For instance, research on digital simulations in scientific education have reported that learners already exposed to these virtual experiments that offer a dynamic learning environment tend to be more curious (Nandani & Raturi, 2024). This digital simulation makes complicated science topics more relatable to students and allows learners to learn from failure in a safe environment, increasing resilience (Nandani & Raturi, 2024). Moreover, case studies from teachers' training institutions in Nigeria are very enlightening, revealing that instruction innovations can yield better results for learners when teachers give adequate support and provide needed digital tools (Ogwazu, 2024; Zhang, 2020).

Research shows that teachers who incorporate instructional innovation into their pedagogy cultivate a learning atmosphere where curiosity and resilience can thrive (Ogwazu, 2024; Zhang, 2020). A number of the cited cases report cumulative knowledge building through digital platforms like educational blogs, online discussion boards, and collaborative learning networks (Oyarzun & Martin, 2023; Kala, 2024). Examples of learners who displayed an increased desire to inquire through challenged standard practices and proposed alternative solutions are behaviours directly associated with the conceptualisation of curiosity. Emphasis on the importance of classroom challenges that required learners to try again and modify their responses as integral in developing resilience and getting students ready for academic hurdles and nuanced real-world contexts were also identified (Ciucă & Zăvoianu, 2024; Goodenough et al., 2020).

Based on these empirical understandings, a clear theme in the literature indicates that a pathway to talent development will be found in instructional innovation. Education in the 21st century is characterised by using digital tools that extend the reach of traditional classroom settings. These approaches through teacher-led innovation allow for a deeper engagement that can often enrich the traditional developmental pathways and meet the requirements for 21st-century skills.

2.2 Conceptual Framework: Teachers' Perspectives on Integrating Instructional Innovations

The study is anchored in constructivism and inquiry-based pedagogy, two foundational frameworks that emphasize active, learner-centred approaches to knowledge construction. Constructivism posits that learners build understanding through hands-on experiences and meaningful interactions with their

environment. Inquiry-based pedagogy complements this by encouraging exploration, questioning, and critical thinking, enabling learners to develop curiosity and resilience as they navigate challenges.

These frameworks advocate for instructional practices that transform classrooms into dynamic spaces where learners actively engage with content, test hypotheses, and reflect on outcomes. Digital tools such as simulations, virtual laboratories, and collaborative platforms provide opportunities for learners to explore concepts iteratively, fostering deeper cognitive engagement and socio-emotional growth (Damaševičius & Sidekerskienė, 2024; Abuznada, 2024).

2.2.1 Institutional and Infrastructural Challenges

Although the potential impact of instructional innovation is recognised broadly, teachers face considerable barriers to adopting such work in their classrooms. For instance, in Nigeria and other parts of the world where educational institutions are diverse, inadequate/lack of resources, infrastructural development, and a hostile institutional policy can make implementing technology-enhanced learning difficult (Abimbola et al., 2024; Ogwazu, 2024). Updating digital tools, unreliable internet connectivity, and inadequate training often serve as hurdles from the teacher's standpoint (Abuznada, 2024; Zbereanu, 2024). Indeed, these challenges reflect the institutions of education systems, which stifle the instructional innovations required to fuel curiosity and resilience in learners (Ciucă & Zăvoianu, 2024; Goodenough et al., 2020).

The literature cites an ongoing gulf between policy and classroom realities. Among education and trainers in under-resourced schools, teachers face obsolete hardware, limited technical support, and little encouragement from the administration to adopt newer tech (Kibirige, 2023). As a result, these institutional constraints compel educators to approach the transition reactively rather than proactively, whereby the chance to experiment and innovate is hampered by external restrictions (Kibirige, 2023). Research consistently uncovers tension between their professional aspirations to create inquiry-rich learning environments and the brutal realities of budgetary and infrastructural constraints (Tarigan et al., 2023; Kibirige, 2023). These systemic issues must be addressed in future policies to ensure that educators can confidently adopt and sustain innovative instructional practices.

2.2.2 Professional Development and the Role of Teacher Training

The success of integrating instructional innovations depends largely on high-quality teacher training and professional development. While evidence indicates such innovative practices are effective, many studies indicate that pre-service and in-service training programs inadequately prepare teachers for the digital age (Bentri & Hidayati, 2023; Elechko, 2024). However, many training sessions prepare educators to administer tools but overlook broader integration to enhance the teaching-learning paradigm, creating a gap between theory and practice (Bentri & Hidayati, 2023; Elechko, 2024). There is such a feeling of inadequacy regarding the nuances and the lack of hands-on training and practices that boost a sense of efficacy in going in and reworking instructional practices.

In addition, teaching in novel ways depends on knowledge of digital tools and how the tools might be leveraged towards teaching and learning outcomes of curiosity and resilience (Ogwazu, 2024; Zhang, 2020). Professional development programs must focus on the theory behind how what we are doing in the classroom leads to developing learner competencies (Elechko, 2024; Popova et al., 2018). At every turn, teachers echo the necessity of ongoing support through mentorship, participation in communities of practice, opportunities to share stories, and collective problem-solving. There is evidence from studies that when teachers are embedded in networks in which the principles of collaborative learning are enacted, their ability to adopt and maintain sustainable, innovative pedagogical approaches is improved (Elechko, 2024; Popova et al., 2018).

2.2.3 Classroom Management and Pedagogical Adaptations

Integrating innovative teaching into everyday classroom practice requires reimagining traditional classroom instruction and management practices. For teachers, introducing new digital tools must capture that delicate balance with the ever-present demands of managing a diverse classroom. While digital platforms can help further create a learning environment where questions are asked and information can be discussed, avenues of distraction may arise from their use if they are not naturally incorporated into the lesson plan (Kibirige, 2023). As instructional innovations, teachers must take a flexible approach to lessons, integrating student engagement and iterative feedback loops to target cognitive and socio-emotional learning outcomes (Abate et al., 2024; Ciucă & Zăvoianu, 2024).

It has been described as both continual and dynamic. Many teachers experience a steep learning curve in shifting from traditional to innovative and technology-driven practices (Elechko, 2024; Popova et al., 2018). However, this shift often comes with major initial disruptions to classroom routines and demands strong classroom management strategies for a new, digital-dominant classroom. Instead, with teachers using new tools more efficiently, they notice a significant difference: students are more engaged overall and acquire competencies like curiosity and resilience. These experiences need to be documented as they represent the concrete evidence, we need that the integration of innovative instruction is transformative, provided there is adequate ongoing training for teachers and a shift in classroom management to do so (Elechko, 2024; Popova et al., 2018).

2.3 Maximising Policy Collaboration and Sustainable Innovation

2.3.1 Strategic Policy Implications and Funding

The systemic shake-up of education policies and funding mechanisms is necessary to meet the challenges of integrating innovation into instruction. Most literature suggests that successful integration requires strong leadership and coordination among educational stakeholders. Researchers indicate that aligning policies with real-life in-school experiences results in sustained change (Amornpaisarnloet, 2020; Shoesmith et al., 2021). Targeted funding to upgrade digital infrastructure and incentives for adopting innovative practices in schools can bridge the yawning chasm and implement ambitions (Amornpaisarnloet, 2020; Shoesmith et al., 2021). Strategic policy interventions must also embody inclusivity and ensure that all learning institutions have equal access to the tools

needed to cultivate curiosity and resilience among their learners, regardless of socio-economic status.

A shared role among government agencies, educational institutions and international partners guides the transformation. Policymakers should then provide the infrastructure for a framework where clear and measurable benchmarks for digital integration and learner competency development are set to ensure that the micro-implementation can sustain a broader table implementation and longer-term sustainability (Amornpaisarnloet, 2020; Shoesmith et al., 2021). Policies should focus on digital access and support continuous professional development, mentorship programs, and collaborative innovation hubs that empower educators (Amornpaisarnloet, 2020; Popova et al., 2018). Such a systemic approach assures that instructional innovations are not standalone projects but embedded components of a larger educational ecosystem.

2.3.2 Building Communities of Practice and Collaborative Networks

When teachers work within collaboration networks, they are more likely to share experiences, strategies and best practices, reinforcing the development and the successful integration of instructional innovation (Nguyen, 2021). Whether virtual or face-to-face, communities of practice represent an indispensable social safety network for teachers who often feel isolated in their resource-poor environment (Nguyen, 2021). Teachers affirm that the collective intelligence within these communities promotes a culture of constant improvement and acts as a lens through which they can better navigate the struggles of integrating technology into practice (Nguyen, 2021). Teachers would be able to spread, develop and scale the evidence-based best practices to nurture curiosity and resilience.

Studies from across the educational landscape reveal that teacher interactions within peer groups and explicit professional learning communities drive the quality of instructional innovations. It facilitates regular reflection, feedback and planning connected to the changing needs of an evolving pedagogy. Collaborative networks can establish partnerships with technology providers, leading to more readily available advanced tools and digital resources (Nguyen, 2021). Fundamentally, these partnerships, based on mutual support and shared objectives, support innovations that generate long-lasting benefits for teachers and learners.

2.3.3 Aligning Instructional Innovation with Learner Competency Development

Indeed, the discussion around instructional innovation calls historians of education to re-negotiate how we frame technology as a means and not an end toward the development of learner competencies. The potential of instructional innovation is directly related to the emergence of cognitive skills and socio-emotional competencies that support curiosity and resilience (Goodenough et al., 2020; Nandani & Raturi, 2024). It involves an overall realignment of the curriculum in which digital tools are integrated with pedagogical practices oriented towards inquiry, reflection, and adaptive learning. These practices can alter the classroom framework into one that encourages learners to endure risks, designed to cultivate problem-solving and collaboration toward challenges (Abate et al., 2024; Ciucă & Zăvoianu, 2024).

The design of teacher training initiatives must respond to changes in policy frameworks that aim to prioritise digital inclusion and digital competence. The digital literacy and creative pedagogy paradigm shift can give teachers the skills to plan an engaging and resilient learning experience (Elechko, 2024). Aligning instructional innovation with learner development depends, in the end, on a shared vision wherein teachers, learners, administrators, and policymakers work together to support a culture of continuous growth and adaptive change. In doing so, this vision is grounded in teachers lived experiences, serving as a roadmap for sustainable educational transformation, one which offers the potential to foster the curiosity and resilience necessary for flourishing in the 21st century.

3. Methodology

3.1 Research Approach/Design

The researcher approached this study using a qualitative research method, firmly believing that teacher participants' narratives and lived experiences provide invaluable insights into how teachers embrace instructional innovation. The researcher was particularly drawn to the phenomenological research design because it offers an in-depth exploration of how teachers perceive and experience changes in their professional practices. This design, with its emphasis on the richness of subjective experience, allowed the researcher to capture the unique ways in which instructional innovation transforms classroom dynamics and learner competency development.

3.2 Sampling Technique

The participants in this study were purposively selected, as they were actively engaged in a professional development workshop aimed at equipping them for the challenges of the new academic session. The researcher deliberately chose this group to ensure every participant possessed recent, firsthand exposure to innovative teaching strategies and professional growth opportunities. The research was conducted at a high-brew school in Port Harcourt City, River State, which is known for its forward-thinking approach to education. This setting provided a conducive environment for innovative practices and added a unique contextual layer to the study. A total of seven primary school teachers participated in the research. Their selection was based on convenience and active involvement in the workshop, naturally positioning them as ideal participants to share insightful reflections on integrating instructional innovation.

3.3 Data Collection

The researcher used semi-structured interviews via Google Forms to ensure the data collection process was flexible and comprehensive. The format allowed the teachers to articulate their thoughts freely while providing a framework guiding the discussion toward key aspects of their experiences. It is also important to note that all participants willingly consented to join the study and were informed of their right to discontinue participation at any stage without facing any consequences.

The data collection spanned a 12-week period, during which the researcher-maintained follow-up engagement with the participants. This timeline facilitated

the gathering of rich, detailed data and allowed the researcher to assess the ongoing impact of the professional development workshop. The follow-ups were particularly beneficial, illuminating the teachers' immediate impressions and evolving perspectives regarding instructional innovation.

3.4 Data Analysis

For data analysis, an interpretive phenomenological approach was adopted. This method allowed for organising and interpreting the teachers' responses in a way that highlighted the interrelatedness of their experiences. Carefully categorising the data into thematic clusters enabled a coherent narrative that reflected the collective insights of the participants. Subsequently, an in-depth discussion of the findings further enriched the study by linking the participants' personal experiences to broader educational theories related to curiosity, resilience, and competency development.

3.5 Ethical Considerations

This study adhered strictly to established ethical guidelines for educational research involving human participants. Prior to data collection, informed consent was obtained from all participating teachers, who were fully briefed on the study's aims, procedures, and their right to withdraw at any stage without penalty. Participation was entirely voluntary, and no incentives were provided that might have influenced consent. To ensure confidentiality and anonymity, all identifying information was removed or pseudonymized in transcripts and reporting; data were securely stored and accessible only to the researcher. The semi-structured interviews were conducted in a manner that respected participants' autonomy and comfort, allowing them to express their views freely.

The research design was sensitive to the professional roles and workloads of the teachers, minimising disruption to their regular duties. Additionally, the study was conducted in accordance with the ethical standards of the Alvan Ikoku Federal University of Education, Owerri and complied with national and institutional regulations regarding research with human subjects. The findings were reported honestly and transparently, with particular care taken to avoid misrepresentation or bias. Finally, the researcher declares that no conflicts of interest exist, and the use of AI tools was limited to language refinement, with full responsibility for the content retained by the author.

This research method and materials section was committed to capturing authentic teacher experiences and translating those into meaningful insights. From the careful selection of participants to the rigorous and reflective data analysis, every step of the process was designed to showcase the profound impact of instructional innovation on learner competency development, thereby contributing significantly to the ongoing discourse in educational research.

4. Results and Discussion of Findings

In this study, the researcher explored how teachers perceive their multifaceted roles in developing a child holistically. The participants' responses were collected through Google Forms during a professional development workshop in one of the

high-brew schools, providing a rich insight into how instructional innovation shapes cognitive and socio-emotional learner competencies. The data are structured into thematic clusters that articulate roles, competencies, strategies, and challenges, reflecting the' broad scope of teacher contributions.

A prominent theme that emerged was the multidimensional role of the teacher. For instance, Participant 1 stated, *"I see my job as multidimensional. I don't only shape the children's minds; I work hard on shaping them as a person,"* highlighting the need for integrating empathy, resilience, and ethical principles into daily instruction. Participant 2 echoed this approach by noting that they *"do more than just teach; I guide children in finding strengths they didn't know they had."* Similarly, Participant 3 underscored the importance of individualised planning by saying, *"I create a unique plan that allows for differentiated learning so that each child can meet not only their educational potential but their interpersonal potential as well."* These voices resonate with contemporary literature emphasising teacher agency in constructing learning environments that promote academic and personal growth (Ekeh & Venketsamy, 2021; Sliwka et al., 2023).

Another theme that came forward was the prioritisation of key learner competencies. Many teachers articulated that cognitive development is crucial, as evidenced by Participant 1's assertion of the foundational role of cognitive ability, which supports academic rigour and encourages lifelong problem-solving. Participant 1 noted, "*The foundation is a positive and proactive mindset towards learning. "Students need to build curiosity and have a mindset that is receptive to new ideas and challenges that is the foundation of any further education."* At the same time, other voices in the study stressed the importance of balanced development. Participant 3 pointed out that alongside academic skills, "*the development of strong moral values and communication skills are just as, if not more, important,"* indicating a push towards the integration of socio-emotional learning with cognitive pursuits, a view supported by research on educational practices (Tarigan, 2023; Fousiya & Saleem, 2024).

In addition to highlighting strengths, the results also shed light on the preferred teaching strategies that facilitate comprehensive development of the child. Participant responses revealed a range of methods, from role-play and interactive discussions to student-centred inquiry-based models that incorporate digital tools. For example, Participant 1 "*Role play is my favourite strategy because it helps learning come alive. It enables students to engage with various scenarios that nurture both critical thinking and emotional intelligence as they actively practice skills they learn in the classroom.* Participant 3 said, "*I prefer a student-centred inquiry-based model incorporating new technology. "I foster a rich, interactive environment that encourages students to inquire and pursue knowledge on their own through digital tools as part of active research and discovery.*

"Participant 2 viewed thus, "*I rely a lot on interactive discussions supported by fun activities. When I encourage my class to talk, I create an environment in which learners are able to express their opinions, which enables critical thinking and exposes them to different point of views in a dynamic learning environment."*

While some advocated using visual aids and one-on-one teaching to cater to different learning styles, others emphasised active learning environments where technology plays a pivotal role. This mix of strategies reflects the broader shift towards technology-enhanced teacher training that is increasingly advocated to foster exploratory and reflective learning (Abate et al., 2024; Puteri & Alfiansyah, 2023).

Finally, challenges remain a significant part of the discourse. Participants candidly described difficulties ranging from limited resource materials and infrastructural deficiencies to differentiating instruction for diverse learner needs. Participant 5 noted, "*That is the challenge; they are faced with practical issues outside of the classroom, insufficient teaching material, inadequate lab facilities, and even erratic electricity",* which impede the full realisation of educational innovation. These challenges call for creat*ive solutions that sometimes curtail the amount of hands-on practical learning.*

Similarly, Participant 2 avowed, "*Environmental conditions are typically tricky. External conditions such as noisy classrooms or infrastructural deficiencies would sometimes prevent smooth delivery of lessons and impact students' concentration," Participant 1 mentioned, "What I struggle with is limited resource materials in the time that is allowed."* While not undermining the commitment to child development competencies, these challenges highlight structural issues needing to fully harness the potential of instructional innovations (Kibirige, 2023; Ogwazu, 2024).

The study's findings present a compelling narrative that underscores the complexity of a teacher's role in fostering child development competencies. As demonstrated by the compelling voices of Participants 1, 2, and 3, teachers are not mere conveyors of knowledge but are pivotal in shaping the learner's cognitive, socio-emotional, and ethical dimensions. This aligns with foundational studies (Ekeh & Venketsamy, 2021) that argue for a more comprehensive approach in teacher training programs that encompasses both innovative pedagogical methods and an emphasis on personal development.

A critical interrogation of these results reveals that while teachers are enthusiastic about employing innovative instructional strategies, ranging from role play to inquiry-based learning, the practical implementation of these approaches is fraught with challenges. Teacher narratives suggest that despite the recognised potential of technology-enhanced learning environments to promote curiosity and resilience (Abate et al., 2024; Gross, 2020), systemic issues such as resource inadequacies and infrastructural constraints continue to impede progress. This dichotomy between aspiration and reality necessitates a deeper reflection on current educational policies and investment in teacher training.

Moreover, the results indicate that while there is a consensus on the importance of developing key competencies like critical thinking, problem-solving, and socio-emotional skills, the diverse strategies adopted by educators indicate varying levels of preparedness to tackle these challenges. The emphasis on individualised learning and digital tools suggests that teachers are making significant strides in adapting instructional practices to meet learner needs. However, the literature

(Puteri & Alfiansyah, 2023; Zbereanu, 2024) points out that such innovations must be systematically supported with appropriate training and resources, thereby highlighting a gap between theoretical frameworks and classroom realities.

Furthermore, the findings also problematise the sustainability of these innovative practices. As noted by several participants, the persistent issue of a limited supply of resources and inadequate infrastructural support corroborates earlier research that critiques policy in educational initiatives (Kibirige, 2023; Ogwazu, 2024). This interrogation of the supporting literature illuminates the urgency for strategic policy interventions that advocate for technological integration and provide the systemic support required to implement these practices effectively.

In conclusion, the findings contribute to enhancing quality education by:
1. Bridging Policy and Practice: Highlighting the gap between policy aspirations and classroom realities, the study calls for targeted policy interventions to address systemic barriers such as inadequate resources and infrastructural deficiencies.
2. Teacher Agency: Demonstrating how teachers adapt and personalise instructional strategies to meet diverse learner needs, the study emphasises the critical role of teacher agency in transforming educational practices.
3. Innovative Pedagogies: Identifying effective strategies such as inquiry-based learning, role-play, and digital tools, the study provides actionable insights for fostering curiosity, resilience, and learner development competencies.
4. Professional Development: Advocating for robust teacher training programs, the study underscores the importance of equipping educators with the skills and confidence to implement innovative practices effectively.

4.1 Recommendations

Drawing from the study results, the researcher proposes a multi-pronged approach to boost the consolidation of technology-infused teaching strategies in Nigerian classrooms. First, economic policymakers and education leaders must start addressing infrastructural deficits by allocating resources toward upgrading classrooms and equipment, ensuring access to electricity, and investing in tools and teaching aids. Resolving these foundational issues would be key to fostering the conditions under which innovative pedagogies will flourish.

Secondly, instructional innovation requires extensive professional development from design to theory and practice. Programs on teacher training need to include provisions for experiential learning experiences on digital tools (in terms of usage in class), role play, and inquiry-based methods, among others. Providing teachers with the skills and confidence will pave the way for the smoother uptake of new teaching practices that foster learner competencies.

Third, educators need to create collaborative networks and communities of practice. Regular peer-to-peer discussion, mentorship or collaborative problem-solving workshops for teachers should be encouraged. Such platforms help educators understand each other's experiences, share learnings and best practices and collaborate to overcome challenges arising from resource constraints.

Furthermore, curriculum designers and educational planners must incorporate flexibility in and across instructional frameworks to enable tailored learning approaches to be built in with adequate space for each learner's unique needs. These strategies will also help to increase the personalisation of learning so that each pupil can flourish academically and in terms of their socio-emotional development in line with their strengths.

Implementation of these ideas must include ongoing evaluation and research. This real-time data facilitation can aid educational authorities in adopting data-informed amendments and keep instructional innovations attuned to the changing dynamics of classroom environments. This giant leap forward is a complete retooling of pedagogical practice, a new approach for sustainable 21st-century education systems capable of achieving the above learning outcomes.

4.2 Future Research Directions:

This study establishes a foundation for future research on instructional innovations, professional development, and educational leadership. Potential areas for investigation include:

1. Conduct longitudinal studies to examine the long-term impacts of instructional innovations on learner competency development, especially curiosity and resilience.
2. Explore the effectiveness of different professional development models in equipping teachers to implement innovative pedagogies.
3. Investigate how collaborative teacher networks and communities of practice can be leveraged to sustain innovative instructional practices.
4. Examine the role of school leadership in fostering a culture of innovation and supporting teachers' efforts to integrate new pedagogical approaches.
5. Conduct comparative studies across different socioeconomic contexts to understand how resource availability impacts the implementation of instructional innovations.

4.3 Limitations of the Study:

The study was constrained by the following limitations:

1. The qualitative, phenomenological approach provides rich insights but limits generalizability. Future studies could employ mixed methods or larger-scale quantitative designs.
2. The small sample of seven teachers from one school limits the diversity of perspectives. A larger, more diverse sample across multiple schools would enhance representativeness.
3. The study was conducted in a single high-performing school in Nigeria, potentially limiting applicability to other educational contexts.
4. The study primarily captures teacher viewpoints. Incorporating student voices could provide a more holistic understanding of the impact of instructional innovations.

5. Conclusion

This study highlights the teachers' pivotal role in engaging instructional innovation to meet the "whole child" needs. The participants speak with

compelling voices that reveal a devotion to promoting academic excellence and socio-emotional and ethical development. Teachers are described as proactive agents who adjust and improve their instructional practices as they adapt to a wide-ranging, changing learning environment.

The insights of the study indicate that though there is great interest in using innovative, technology-enabled teaching methods, many barriers, such as teaching time, infrastructural challenges, and environmental disturbances, hinder effective implementation. These challenges also underline the importance of more responsive educational policies that take the realities of classroom contexts into account and ensure that classroom innovations are not implemented as one-off initiatives but as a supported system of pedagogic change.

The research also highlights the role of collaborative professional networks and communities of practice that help educators share best practices and troubleshoot problems together. These networks strengthen teacher effectiveness and support the prolongation of innovative instructional practices. With such evidence to support the call for ongoing and extensive teacher training, there is an urgency to integrate digital devices into the teaching process, targeting pedagogical foundations with academic and developmental outcomes.

The teachers' voices, too, remind us that the success of education is dependent on a supportive learning environment, on a physical and social setting that acts as a multiplier to innovative practices. As such, these findings contribute to a broader range of educational theories, and there is a need to re-evaluate scaling up instructional innovation in under-resourced settings. This study is seminal in the education reform conversation, underlining the transformational potential of innovation in the classroom in the right policy environment with the necessary infrastructure.

5.1 Declaration of AI in Scientific Writing

During the preparation of this work, the author used Monica AI for language polishing, clarity, and overall structural organisation. After using this tool/service, the author reviewed and edited the content as needed and takes full responsibility for the content of the publication.

5.2 Funding Details

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5.3 Disclosure Statement

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