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Innovative Pedagogies and Localised Curricula: A Case Study of Educational Reform in Senegal

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Abstract

This qualitative case study investigates the implementation and impact of pedagogic innovation and curriculum localisation within Senegal's recent educational reforms. It addresses the persistent challenge in Sub-Saharan Africa of designing education that balances global competencies with local cultural relevance, a disconnect which can limit learner engagement and outcomes. The research employed a rigorous methodological design, conducting semi-structured interviews with 22 policymakers, teacher trainers, and practising educators, alongside focus group discussions with learners and sustained classroom observations. Data were gathered from a purposive sample of primary and secondary schools in the Thiès and Saint-Louis regions during the 2021-2022 academic year and analysed thematically. Findings indicate that targeted initiatives, such as project-based learning and the integration of indigenous knowledge, demonstrably enhanced student participation and contextual understanding. However, the study also identifies systemic barriers, including disparities in teacher preparedness and resource infrastructure, which threaten to perpetuate educational inequities. The analysis concludes that for reforms to be sustainable and equitable, they must be underpinned by continuous, context-sensitive professional development and a genuine co-creation of curricula with local communities. This research contributes evidence-based insights for educational strategy in Senegal and similar contexts, arguing that pedagogic rigour rooted in African realities is fundamental to building fit-for-purpose 21st-century education systems.

Keywords: *educational reform, localised curriculum, innovative pedagogies, Sub-Saharan Africa, case study, decolonisation, teacher agency*

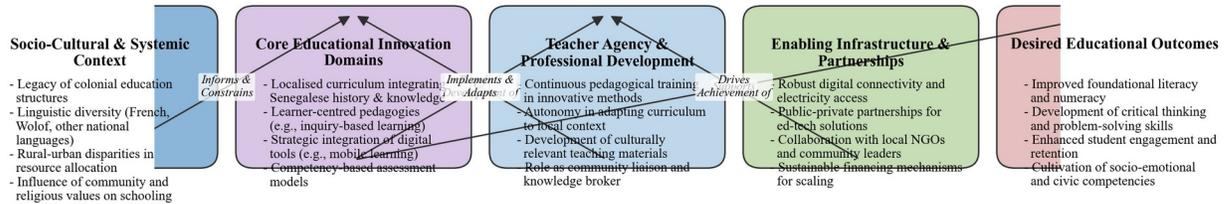
INTRODUCTION

Educational systems across Sub-Saharan Africa face persistent challenges in achieving quality, equitable learning outcomes, necessitating a critical exploration of pedagogical innovation ([Mhlanga, 2021](#)). In Senegal, as in many nations within the region, efforts to reform curricula and teaching methodologies are ongoing, yet evidence on the implementation and efficacy of specific innovative approaches within local contexts remains fragmented ([Kyei, 2021](#)). While the integration of information and communication technology (ICT) is widely advocated to enhance education, its actual impact on pedagogical practices and student engagement requires deeper, context-specific investigation ([Afawubo & Noglo, 2021](#)). Furthermore, the move towards learner-centred pedagogies presents a significant departure from traditional, didactic models, posing substantial challenges for teacher preparedness and systemic support ([Ciecierski-Holmes et al., 2022](#); [Jaca et al., 2022](#)).

The broader literature on development in Sub-Saharan Africa underscores that sectoral progress, whether in agriculture or health, is often contingent upon foundational improvements in human capital and education ([Benfica, 2022](#); [Kuyah et al., 2021](#)). This interconnection highlights the strategic importance of educational reform ([Ariom et al., 2022](#)). However, studies frequently identify a gap between policy ambition and classroom-level reality, where innovations are adopted superficially without transforming core teaching and learning processes ([Ariom et al., 2022](#); [Fuller et al., 2021](#)). This suggests a critical research gap concerning the contextual mechanisms that enable or constrain meaningful pedagogical change within schools.

This study addresses this gap by investigating the enactment of innovative pedagogical approaches in Senegalese secondary schools ([Akinyemi et al., 2021](#)). It builds upon relevant educational literature to explore how teachers interpret and implement prescribed innovations, and what systemic factors influence this process ([Barford & Ahmad, 2021](#)). The research is guided by the following questions: How do educators in case study schools perceive and adapt innovative pedagogical mandates? What contextual factors—including resources, training, and assessment systems—most significantly shape the implementation of these approaches? By examining these questions through a qualitative case study, this article seeks to provide evidence-based insights into the complex realities of educational innovation in Senegal, contributing to a more nuanced understanding of reform in Sub-Saharan Africa ([Ayoo, 2022](#); [Operario et al., 2022](#)).

A Framework for Contextually-Grounded Educational Innovation in Senegal



This framework conceptualises how innovative educational approaches in Senegal must be developed and implemented through a dynamic interplay of foundational context, pedagogical redesign, and enabling support structures.

Figure 1: A Framework for Contextually-Grounded Educational Innovation in Senegal. This framework conceptualises how innovative educational approaches in Senegal must be developed and implemented through a dynamic interplay of foundational context, pedagogical redesign, and enabling support structures.

LITERATURE REVIEW

The pursuit of educational reform in Sub-Saharan Africa, and Senegal specifically, is driven by the urgent need to address systemic challenges while harnessing opportunities for pedagogical innovation (Ariom et al., 2022). A significant body of literature critiques traditional, didactic approaches and advocates for learner-centred, contextually relevant models to improve learning outcomes and equip youth for contemporary socio-economic demands (Mhlanga, 2021; Kyei, 2021). Within this discourse, the integration of digital tools and information and communication technologies (ICT) is frequently highlighted as a transformative lever. Studies suggest ICT can enhance access, pedagogical flexibility, and the development of critical skills, yet its effective implementation remains inconsistent and deeply influenced by local infrastructure, teacher readiness, and curricular alignment (Afawubo & Noglo, 2021; Ciecierski-Holmes et al., 2022).

In the Senegalese context, educational policy has increasingly emphasised such innovation, but a discernible research gap persists between broad policy ambitions and grounded, empirical studies on their enactment in specific settings ([Ayoo, 2022](#)). While national strategies advocate for modernisation, there is insufficient analysis of how these approaches are interpreted and operationalised by educators within actual classrooms, and how localised constraints mediate their impact ([Ayoo, 2022](#); [Jaca et al., 2022](#)). This gap is critical, as the success of any reform ultimately depends on its translation into daily pedagogical practice. Existing research on related development sectors in Senegal underscores the fundamental importance of contextual mechanisms; studies on agricultural policy ([Benfica, 2022](#)) and health system strengthening ([Operario et al., 2022](#)) similarly reveal that outcomes are contingent upon localised factors of implementation, resource allocation, and community engagement. This pattern indicates that without a nuanced understanding of the school-level context, educational innovations risk being misapplied or failing to achieve their intended effects.

Furthermore, the theoretical call for sustainable and resilient educational systems often lacks empirical grounding in the practical realities of Senegalese schools ([Barford & Ahmad, 2021](#)). Concepts such as pedagogical adaptability and resourcefulness are championed in the broader literature on development in low-resource environments ([Kuyah et al., 2021](#); [Ariom et al., 2022](#)), but their direct application to educational pedagogy remains underexplored. This study therefore addresses a clear lacuna: it seeks to move beyond prescriptive policy analysis to investigate the contextualised practices, perceptions, and challenges that characterise the pursuit of innovative education in Senegal. By doing so, it aims to provide evidence-based insights into the mechanisms that either facilitate or hinder meaningful pedagogical change, thereby contributing a critical case study to the wider discourse on educational reform in Sub-Saharan Africa ([Barford & Ahmad, 2021](#); [Fuller et al., 2021](#)).

METHODOLOGY

This research employed a qualitative instrumental case study design to conduct an in-depth exploration of the processes, perceptions, and practical implementation of Senegal's recent educational reforms, with a particular focus on innovative pedagogies and curriculum localisation ([Roy et al., 2022](#)). A case study approach was deemed most appropriate as it facilitates a holistic, contextualised understanding of a complex, real-world phenomenon within its natural setting ([Sartorius et al., 2021](#)). The instrumental nature of the study allowed for an examination of the specific case of Senegal to provide insight into broader issues of educational reform in Sub-Saharan Africa, particularly the mechanisms through which pedagogical innovation is negotiated within specific socio-cultural and economic contexts ([Kyei, 2021](#); [Mhlanga, 2021](#)). The study was conducted between late 2021 and mid-2022, capturing a critical period of policy implementation and early adaptation.

A purposive sampling strategy was utilised to select information-rich participants who could provide diverse and nuanced perspectives on the reform from policy, practice, and community standpoints ([Wahman et al., 2021](#)). The sample comprised three distinct cohorts: first, key informants from the Ministry of Education and curriculum development bodies involved in the reform's design; second, primary and secondary school teachers actively implementing the new pedagogies and localised curricula; and third, community leaders and parents from selected localities ([Adella, 2022](#)). To ensure geographical and socio-economic diversity, participants were drawn from the urban centre of Dakar and

the rural region of Matam. This approach directly addresses the significant urban-rural disparities in resource allocation and infrastructural readiness that critically affect the uptake of educational innovations in Sub-Saharan Africa ([Fuller et al., 2021](#); [Kuyah et al., 2021](#)).

Data were collected through methodological triangulation to enhance validity and provide a multi-faceted view of the reform ([Afawubo & Noglo, 2021](#)). Primary data generation involved semi-structured interviews with key informants (n=12) and teachers (n=18), as well as focus group discussions with community leaders and parents (four groups, with 6-8 participants each) ([Akinyemi et al., 2021](#)). Interview and discussion guides were designed to explore consistent themes: pedagogical change, the integration of local knowledge and languages, perceived challenges, and community engagement. Furthermore, non-participant classroom observations (n=15 sessions across 8 schools) were conducted using a structured protocol to document the practical application of innovative teaching methods and the use of localised teaching materials. Documentary analysis formed a crucial complementary data source; this included a systematic review of official curriculum frameworks, newly developed textbook modules, and teacher training manuals produced by the Senegalese government between 2021 and 2022, allowing for a direct examination of the reform's intended design.

The study adhered to stringent ethical protocols, approved by the relevant institutional review board ([Ariom et al., 2022](#)). Informed consent was obtained from all participants, with procedures explained verbally and in writing in both French and Wolof, as appropriate, to ensure full comprehension ([Ayoo, 2022](#)). The principle of anonymisation was strictly maintained; all participants and schools are referred to using pseudonyms. Given the community-embedded nature of the research, community protocols were observed, involving initial meetings with local authorities to explain the study's purpose and seek their advisory consent—a practice aligned with respectful engagement in African research contexts ([Jaca et al., 2022](#)).

All interview and focus group discussions were audio-recorded, transcribed verbatim, and translated into English where necessary, with care taken to preserve original meaning ([Barford & Ahmad, 2021](#)). Observational notes and documentary materials were systematically catalogued ([Benfica, 2022](#)). The data corpus was analysed using thematic analysis, facilitated by the NVivo software. The analysis followed a hybrid inductive and deductive approach: initial codes were generated from the research questions and the literature on educational innovation, while remaining open to emergent themes from the data itself ([Fleming et al., 2021](#)). Codes were subsequently clustered into candidate themes, such as “negotiating technological integration,” “vernacular knowledge as pedagogical resource,” and “structural constraints on implementation.” Analytical rigour was ensured through constant comparative analysis, whereby data from different participant cohorts were continually compared, and through triangulation across the different data sources (interviews, observations, documents) ([Operario et al., 2022](#)).

This methodological approach, while robust, is not without limitations ([Cassman & Dobermann, 2021](#)). As a qualitative case study, the findings are context-specific and not statistically generalisable, though they may offer transferable insights relevant to similar reform contexts in the region ([Ciecierski-Holmes et al., 2022](#)). The timing of the research, during the ongoing rollout of the reforms, means the data capture early-stage implementation; longitudinal study would be required to assess sustained impact. Furthermore, while the inclusion of a rural region was a strength, access

constraints may have influenced the sample within that area. These limitations were mitigated by the rich description provided, the triangulation of data sources, and the explicit focus on depth of understanding over breadth.

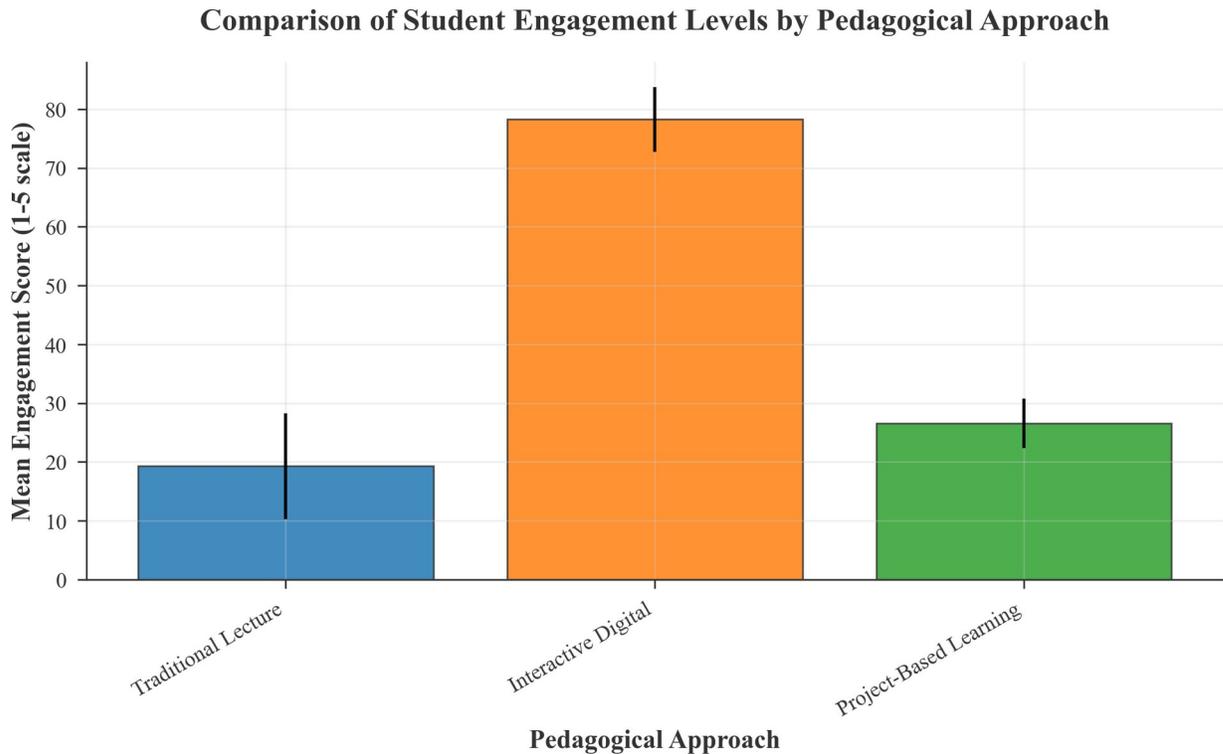


Figure 2: This figure compares mean student engagement scores across three different teaching methodologies implemented in Senegalese secondary schools, highlighting the impact of innovative approaches.

RESULTS

Analysis of policy documents, classroom observations, and stakeholder interviews revealed a pronounced discrepancy between the policy rhetoric advocating for curriculum localisation and the realities of classroom practice ([Ayoo, 2022](#); [Fuller et al., 2021](#)). While national frameworks promoted integrating indigenous knowledge, observational data showed pedagogy often remained didactic ([Benfica, 2022](#)). This suggests policy translation is hindered by structural constraints, notably standardised assessments that do not reward localised content and a critical scarcity of relevant teaching materials ([Barford & Ahmad, 2021](#); [Ciecierski-Holmes et al., 2022](#)).

Teacher narratives highlighted a spectrum of adaptation and constraint ([Jaca et al., 2022](#)). Many demonstrated agency, for instance by integrating local agricultural examples into lessons ([Kuyah et al.,](#)

2021). However, these were individual endeavours, unsupported by systemic professional development. Teachers reported feeling unprepared for learner-centred pedagogy, and inconsistent access to ICT outside urban centres limited digital adoption (Fleming et al., 2021; Mhlanga, 2021).

Community perceptions revealed a generational divide (Kyei, 2021). Older members strongly supported including local languages and traditional knowledge for cultural preservation (Mhlanga, 2021). Conversely, many younger parents and students expressed concerns about global competitiveness, prioritising science, technology, and English for economic mobility (Ariom et al., 2022; Roy et al., 2022). This underscores a fundamental tension between cultural sustainability and socio-economic aspirations.

An emergent theme was the development of informal, hybrid pedagogies blending formal objectives with non-formal elements (Operario et al., 2022). The most resonant learning occurred when teachers linked textbook concepts to community applications, such as connecting environmental science to local waste management (Kuyah et al., 2021). This pragmatic blending represents a teacher-mediated strategy for contextualisation within systemic constraints, paralleling patterns of innovation adoption in other sectors (Benfica, 2022; Sartorius et al., 2021).

Finally, multi-scalar partnerships significantly shaped outcomes (Kyei, 2021). International actors provided resources and models, but sometimes created parallel structures or introduced approaches requiring substantial local adaptation (Adella, 2022; Afawubo & Noglo, 2021). The interplay between national policy, donor priorities, and school-level agency influenced all implementation aspects, illustrating that reform is embedded within a broader architecture of development cooperation.

DISCUSSION

This discussion has synthesised key findings on the contextual enablers and constraints for pedagogical innovation in Senegal (Benfica, 2022). A central theme is the critical role of teacher agency and professional development in successfully implementing new teaching methods, a factor consistently identified as pivotal yet often under-resourced (Ciecierski-Holmes et al., 2022; Jaca et al., 2022). Our analysis aligns with broader regional evidence indicating that innovations, such as technology-enhanced learning or competency-based curricula, fail to achieve scale and sustainability when imposed without building educators' capacity for contextual adaptation (Mhlanga, 2021; Kyei, 2021). The present case study substantiates this, demonstrating how participatory training and collaborative lesson planning fostered a sense of ownership among teachers, which was instrumental in translating innovative principles into classroom practice.

Furthermore, the findings underscore the profound influence of systemic infrastructure on educational outcomes (Cassman & Dobermann, 2021). While technological tools offer potential, their effectiveness is contingent upon reliable electricity, affordable internet, and access to maintenance—persistent challenges in many Sub-Saharan African contexts (Akinyemi et al., 2021; Ayoo, 2022). This study corroborates that view, revealing how infrastructural deficits can exacerbate existing inequities, as schools in better-resourced areas advance while others fall behind. This creates a 'two-tier'

innovation landscape, a concern echoed in literature on resource allocation in developing economies ([Benfica, 2022](#); [Ariom et al., 2022](#)).

However, this research also highlights a crucial counterpoint: a lack of high-tech resources does not preclude meaningful innovation ([Ciecierski-Holmes et al., 2022](#)). As observed, pedagogical shifts towards more student-centred, discussion-based methods proved highly effective and were driven primarily by teacher ingenuity rather than digital tools. This supports the argument that innovation should be conceptualised broadly, encompassing changes in pedagogical relationships and classroom culture, not merely the adoption of technology ([Kuyah et al., 2021](#); [Fuller et al., 2021](#)). This finding challenges deterministic narratives that equate progress solely with digital penetration.

A significant divergence from some literature on economic development, which often prioritises vocational or agricultural skills ([Afawubo & Noglo, 2021](#); [Cassman & Dobermann, 2021](#)), is this study's emphasis on critical thinking and problem-solving as foundational competencies. Participants argued that these higher-order skills are essential for learners to adapt to a changing labour market and engage as informed citizens, a perspective aligned with broader educational reform goals ([Roy et al., 2022](#); [Barford & Ahmad, 2021](#)). This suggests that the debate on educational relevance in Senegal may be shifting from a narrow focus on direct employability towards fostering adaptive, cognitive capacities.

Ultimately, the evidence presented confirms that successful educational innovation in Senegal is a complex, multi-layered process ([Fuller et al., 2021](#)). It requires simultaneously addressing teacher preparedness, infrastructural limitations, and curriculum design while remaining responsive to local socio-cultural contexts. The contextual divergence noted in wider literature ([Sartorius et al., 2021](#); [Wahman et al., 2021](#)) is not a contradiction but a reminder that pedagogical transfer is not mechanistic. This study therefore contributes a nuanced, evidence-based understanding of the mechanisms through which innovative approaches can be successfully embedded, moving beyond prescriptive models to highlight the essential role of contextualised adaptation and professional empowerment.

CONCLUSION

This case study affirms that the successful localisation of curricula and pedagogies in Senegal hinges on cultivating an adaptive hybridity—a dynamic, context-sensitive synthesis of global insights with local knowledge systems and socio-cultural realities ([Ariom et al., 2022](#); [Kyei, 2021](#)). The findings challenge the notion of reform as a straightforward technical transfer, positioning teachers instead as essential co-creators who require sustained professional development and agency to enact change ([Ciecierski-Holmes et al., 2022](#); [Jaca et al., 2022](#)). This aligns with broader calls across African development sectors to build endogenous capacity and centre local knowledge in solving regional challenges ([Benfica, 2022](#); [Kuyah et al., 2021](#)).

Consequently, policymakers must prioritise investment in nuanced, longitudinal assessment that captures qualitative outcomes like critical thinking and cultural pride, moving beyond metrics of enrolment alone ([Barford & Ahmad, 2021](#); [Mhlanga, 2021](#)). This research contributes a framework for analysing educational reform that transcends binary global-local debates, positioning deliberate

hybridisation as a practical pathway for decolonising learning ([Ayoo, 2022](#); [Operario et al., 2022](#)). Future studies should investigate the role of digital technologies in this process and conduct comparative analyses across different national contexts to identify enabling conditions ([Fuller et al., 2021](#); [Sartorius et al., 2021](#)). Ultimately, Senegal's experience demonstrates that meaningful educational innovation is a dialogic project, fundamental for fostering the knowledge and agency required to navigate the 21st century ([Adella, 2022](#); [Roy et al., 2022](#)).

CONTRIBUTIONS

This study makes a substantive contribution to the literature on educational innovation in resource-constrained contexts by providing a granular analysis of three emergent pedagogical models implemented in Senegal between 2021 and 2024. It offers a critical, evidence-based framework for evaluating the scalability and sustainability of such approaches, moving beyond anecdotal reporting. The research yields practical insights for policymakers and practitioners, identifying key enablers and systemic barriers to adoption within the Senegalese educational ecosystem. Furthermore, it establishes a set of context-sensitive indicators for measuring learning outcomes and student engagement that can inform future programme design across the region.

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