



Innovative Pedagogies in STEM Education: Enhancing Outcomes through Senegalese Contextualised Approaches

Mamoudou Diakhato¹

¹ Institut Sénégalais de Recherches Agricoles (ISRA)

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Correspondence: mdiakhato@yahoo.com

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Author notes

Mamoudou Diakhato is affiliated with Institut Sénégalais de Recherches Agricoles (ISRA) and focuses on Education research in Africa.

Abstract

In Senegal, there is a growing recognition of the importance of STEM (Science, Technology, Engineering, and Mathematics) education for fostering innovation and economic growth. The research employed qualitative methods including interviews with educators, focus group discussions with students and parents, and document analysis of existing curricula and teaching materials. Data were collected from schools across different regions of Senegal. Contextualised STEM pedagogies have shown a significant positive impact on student engagement and understanding of complex concepts, particularly when aligned with local contexts such as agriculture and environmental issues. The findings suggest that integrating traditional knowledge systems into STEM education can lead to more effective learning outcomes and better student performance in these subjects. Educators and policymakers should prioritise the development and implementation of contextually relevant STEM curricula, including collaboration with local communities to ensure relevance and effectiveness. STEM Education, Senegal, Contextualised Pedagogies, Innovation, Student Outcomes

Keywords: *African Geography, STEM Education, Qualitative Research, Pedagogical Innovation, Contextualised Approaches, Anthropology of Education, Ethnography*

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