



Innovative Pedagogies for Strengthening STEM Education in Senegal

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Abstract

In Senegal, despite efforts to improve STEM education outcomes, disparities persist between urban and rural areas, and between public and private schools. The study employed mixed-methods research design including surveys, classroom observations, and interviews to assess teacher practices and student performance across diverse settings. Innovative pedagogies led to an increase of 20% in student engagement scores in STEM subjects, particularly noticeable in rural schools where traditional methods had previously dominated. The findings suggest that integrating technology-enhanced learning tools and collaborative problem-solving activities can significantly improve STEM education outcomes in Senegal. School districts should prioritise professional development for teachers to effectively implement these innovative pedagogies, fostering a culture of continuous improvement. STEM Education, Innovation Pedagogy, Educational Equity, Senegal

Keywords: *Sub-Saharan, pedagogy, constructivism, multiculturalism, curriculum reform, indigenous knowledge, ethnography*

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