



Innovative Pedagogies for Enhancing STEM Education Outcomes in Senegal: A Survey Study

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Abstract

This study examines innovative pedagogical approaches to enhance STEM education outcomes in Senegal's educational context. A survey was conducted among teachers from selected schools across Senegal. The survey aimed to gather data on their perceptions of current pedagogies, preferences for new teaching methods, and perceived effectiveness in improving STEM outcomes. The findings indicate a strong preference for project-based learning (PBL) over traditional lectures, with 75% of respondents favoring PBL as an effective method to enhance student engagement. Additionally, there is a trend towards integrating flipped classroom practices, with 60% of teachers expressing interest in implementing these methods. Innovative pedagogical approaches such as project-based learning and flipped classrooms show promise for improving STEM education outcomes in Senegal's educational settings. Based on the survey results, schools should prioritise integrating PBL and flipped classroom elements into their curricula to better engage students and improve academic performance in STEM subjects. STEM Education, Innovative Pedagogies, Project-Based Learning, Flipped Classroom, Senegal

Keywords: *African geography, pedagogy innovation, constructivism, problem-based learning, STEM education effectiveness, instructional design, formative assessment*

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