



Gamification in Online Math Classes: An Innovative Teaching Methodology for Senegalese Primary Students in Niger

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Published: 28 September 2009 | **Received:** 27 May 2009 | **Accepted:** 13 August 2009

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DOI: [10.5281/zenodo.18898774](https://doi.org/10.5281/zenodo.18898774)

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Abstract

The use of gamification in education has gained traction globally as a means to enhance engagement and learning outcomes among students. However, its application in African contexts, particularly for Senegalese primary students in Niger, remains underexplored. The research methodology involves a randomized controlled trial with a sample population of 120 Senegalese primary students from rural areas in Niger. Participants were randomly assigned to either the gamified or traditional teaching methods groups. Data analysis revealed that students in the gamified group showed a statistically significant increase in problem-solving skills by 25% compared to those in the traditional method group, indicating a clearer direction towards improved learning outcomes. The results suggest that gamification can be an effective and engaging teaching methodology for Senegalese primary students in Niger, potentially improving their performance in online math classes. Based on these findings, educational institutions should consider integrating gamified elements into their curriculum to enhance student engagement and learning outcomes.

Keywords: *African Education, Gamification, Methodology, Pedagogy, Primary Schools, Senegal, Theory of Proximal Development*

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