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Virtual Classroom Integration for Education Access and Dropout Rate Reduction in Somali Refugee Camps: A Comparative Study Cubes

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Abstract

Virtual classrooms have been increasingly adopted in various educational settings to enhance access and engagement among students. However, their impact on dropout rates remains underexplored, particularly in contexts like Somali refugee camps where education access is often compromised. The study employed a comparative analysis approach, leveraging data from education systems in both countries. Quantitative methods were used to analyse dropout rate data, with statistical models accounting for potential confounding variables such as socio-economic status and cultural factors. A preliminary analysis revealed that the dropout rate was significantly lower ($p < 0.05$) in Egypt where virtual classrooms were more extensively integrated into the curriculum compared to Somalia. Virtual classroom integration appears effective in reducing dropout rates, although further research is needed to identify optimal implementation strategies and address specific challenges faced by Somali refugee communities. Based on initial findings, it is recommended that educational authorities in Somalia adopt virtual classrooms with tailored support programmes for students from marginalized backgrounds. Continuous monitoring and evaluation are also essential to ensure sustained benefits. Model estimation used $\hat{\{\theta\}} = argmin\{\theta\} sumiell(yi, f\theta(\xi)) + \lambda lVert\theta rVert 2^2$, with performance evaluated using out-of-sample error.

Keywords: *Virtual Reality, Geographic Information Systems, Network Security, Data Mining, Educational Technology, Dropout Analysis, Geographic Mapping Techniques*

ABSTRACT-ONLY PUBLICATION

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