



# Methodological Evaluation of Secondary School Systems in Uganda: Adoption Rates via Difference-in-Differences Analysis

Otombe Namusoke<sup>1</sup>, Kabaree Okello<sup>2</sup>, Ssizyina Kabagiya<sup>3</sup>

<sup>1</sup> Department of Software Engineering, Medical Research Council (MRC)/UVRI and LSHTM Uganda Research Unit

<sup>2</sup> Department of Artificial Intelligence, Gulu University

<sup>3</sup> Gulu University

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**Correspondence:** [onamusoke@hotmail.com](mailto:onamusoke@hotmail.com)

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## Author notes

*Otombe Namusoke is affiliated with Department of Software Engineering, Medical Research Council (MRC)/UVRI and LSHTM Uganda Research Unit and focuses on Computer Science research in Africa.*

*Kabaree Okello is affiliated with Department of Artificial Intelligence, Gulu University and focuses on Computer Science research in Africa.*

*Ssizyina Kabagiya is affiliated with Gulu University and focuses on Computer Science research in Africa.*

## Abstract

Secondary school systems in Uganda are evolving, influenced by national policies and international development initiatives. There is a need to evaluate how these systems have adapted to new educational standards. The study employs a DiD approach to measure the impact of policy interventions on secondary school systems. It uses pre- and post-intervention data from randomly selected Ugandan schools as well as a comparison group that did not receive the intervention, with statistical models accounting for potential confounding variables such as socio-economic status. Initial analysis suggests an adoption rate increase by approximately 20% in treated schools compared to the control group, though this trend varied geographically and among different school types. The DiD model effectively captures the effect of policy changes on secondary school systems, providing insights into factors that influence curriculum adaptation. Future research could explore long-term impacts and broader contextual factors affecting adoption rates across Ugandan schools. Model estimation used  $\hat{\theta} = \text{argmin} \{ \theta \} \text{sumiell} (y_i, f\theta(\xi)) + \lambda \text{Vert}\theta \text{rVert}^2$ , with performance evaluated using out-of-sample error.

**Keywords:** *Sub-Saharan, stratified sampling, econometrics, propensity scoring, diffusion of innovations, randomized controlled trials, regression analysis*

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