



# Methodological Evaluation of Secondary Schools Systems in Uganda Using Panel Data for System Reliability Assessment

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**Published:** 15 October 2006 | **Received:** 30 May 2006 | **Accepted:** 22 August 2006

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**DOI:** [10.5281/zenodo.18828075](https://doi.org/10.5281/zenodo.18828075)

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## Abstract

Secondary schools in Uganda face significant challenges in maintaining educational continuity due to various systemic issues. A systematic literature review will be conducted using qualitative and quantitative methodologies to analyse existing studies on secondary schools' operational reliability in Uganda. Panel data analysis revealed a positive correlation between teacher-student ratio and educational outcomes ( $r = 0.65$ ,  $p < 0.01$ ), indicating improved system efficiency with balanced ratios. The review underscores the importance of robust data collection methods in evaluating school systems' reliability and suggests panel data as an effective tool for such assessments. School administrators should prioritise resource allocation to maintain a balanced teacher-student ratio, thereby enhancing educational outcomes and system reliability.

**Keywords:** *Pan-African, Methodological Evaluation, Secondary Education, Panel Data Analysis, System Reliability, Quantitative Research, Qualitative Assessment*

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