



Methodological Assessment and Time-Series Forecasting of Secondary School Systems in Senegal,

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Abstract

This scoping review focuses on methodological assessments of secondary school systems in Senegal, with a specific interest in forecasting adoption rates over time. The review employs systematic literature mapping techniques to analyse existing studies on secondary school systems in Senegal. A time-series forecasting model is developed using ARIMA (AutoRegressive Integrated Moving Average) methodology for predicting adoption rates over a specified period. A key finding is the significant variability in reported adoption rates across different schools and regions, with some showing rapid uptake while others remain static. The review concludes that current methodologies lack robust time-series forecasting models to accurately predict adoption rates. The proposed ARIMA model can enhance the reliability of such forecasts. Recommendations include integrating a more sophisticated time-series forecasting model into future studies and conducting further empirical research to validate these findings in real-world settings. The empirical specification follows $Y = \beta_{0+\beta}^- p X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *Sub-Saharan, educational policy, longitudinal analysis, mixed methods, quantitative forecasting, qualitative data, indicator development*

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