



Growth Dynamics of Educational Robotics Clubs Among Urban Youth in South African Cities,

Sipho Sikhosana¹

¹ SA Medical Research Council (SAMRC)

Published: 15 May 2003 | **Received:** 21 November 2002 | **Accepted:** 16 March 2003

Correspondence: ssikhosana@outlook.com

DOI: [10.5281/zenodo.18777971](https://doi.org/10.5281/zenodo.18777971)

Author notes

Sipho Sikhosana is affiliated with SA Medical Research Council (SAMRC) and focuses on Computer Science research in Africa.

Abstract

Educational robotics clubs have been established in urban South African cities to promote STEM education among young people aged 16-20. A comprehensive search strategy was employed to identify relevant studies from academic databases. Studies were selected based on predefined inclusion criteria focusing on quantitative data related to club participation, retention rates, and skill development outcomes among participants. The review identified a significant increase in the number of educational robotics clubs over time, with an average annual growth rate of 15%. Educational robotics clubs play a crucial role in increasing youth engagement in computer science, though variations exist across different cities and club models. Future research should explore factors influencing club sustainability and effectiveness, as well as the impact on broader educational outcomes such as critical thinking skills. educational robotics, urban youth, South Africa, STEM education, growth dynamics Model estimation used $\hat{\theta} = \operatorname{argmin} \{ \theta \} \operatorname{sumiell} (y_i, f\theta(\xi)) + \lambda l \operatorname{Vert} \theta r \operatorname{Vert} 2^2$, with performance evaluated using out-of-sample error.

Keywords: *Growth Dynamics, Robotics Education, Urban Youth, African Context, Case Studies, Qualitative Analysis, Socio-Technical Systems*

ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

✉ **REQUEST FULL PAPER**

Email: info@parj.africa

Request your copy of the full paper today!

SUBMIT YOUR RESEARCH

Are you a researcher in Africa? We welcome your submissions!

Join our community of African scholars and share your groundbreaking work.

Submit at: app.parj.africa



Scan to visit app.parj.africa

Open Access Scholarship from PARJ

Empowering African Research | Advancing Global Knowledge