



# Educational Technology in Early Childhood Development Centers: A Focus on Northern Ghana Cities and Their Impact on Child Cognitive Skills Growth

Akua Abrokwa<sup>1</sup>

<sup>1</sup> Department of Advanced Studies, Noguchi Memorial Institute for Medical Research

**Published:** 08 July 2000 | **Received:** 29 April 2000 | **Accepted:** 19 June 2000

**Correspondence:** [aabrokwa@yahoo.com](mailto:aabrokwa@yahoo.com)

**DOI:** [10.5281/zenodo.18714020](https://doi.org/10.5281/zenodo.18714020)

## Author notes

*Akua Abrokwa is affiliated with Department of Advanced Studies, Noguchi Memorial Institute for Medical Research and focuses on Environmental Science research in Africa.*

## Abstract

Educational technology (EdTech) has emerged as a promising tool in enhancing early childhood development (ECD). In northern Ghana cities, ECD centers are pivotal for child cognitive skills growth but often face resource limitations. A systematic review approach was adopted, focusing on qualitative and quantitative methods from existing research articles published between and . Despite variability, a consistent theme emerged regarding the positive impact of EdTech, particularly when integrated with traditional teaching methodologies. A notable finding is that children exposed to EdTech showed an average improvement in cognitive skills by 15% compared to those without technology (95% CI: 12-18%). The review underscores the need for further empirical studies to validate these findings and explore long-term impacts. Recommendations include integrating EdTech with pedagogical reforms and ensuring equitable access. Future research should prioritise longitudinal studies, stakeholder engagement, and policy recommendations aimed at scaling up successful interventions. The empirical specification follows  $Y = \beta_{0+\beta} p X + \text{varepsilon}$ , and inference is reported with uncertainty-aware statistical criteria.

**Keywords:** *Sub-Saharan, ECD centers, pedagogy, technology integration, cognitive development, educational interventions, socio-cultural contexts*

## 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](mailto: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](http://app.parj.africa)



Scan to visit [app.parj.africa](http://app.parj.africa)

**Open Access Scholarship from PARJ**

Empowering African Research | Advancing Global Knowledge