



# Educational Technology in Early Childhood Development: A Comparative Study in Democratic Republic of Congo

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## Abstract

Educational technology (EdTech) has emerged as a critical tool for early childhood development (ECD), aiming to enhance cognitive skills in children. In Democratic Republic of Congo (DRC), where access to quality education is limited, EdTech could offer innovative solutions. The study employs a mixed-methods approach combining quantitative surveys and qualitative interviews. Data was collected from four regions in DRC, involving over 100 schools with varying levels of technological infrastructure. The sample includes both urban and rural areas to ensure comprehensive coverage. Initial findings suggest that EdTech platforms significantly improved cognitive skills among children exposed to the intervention compared to those without access. In one region, there was a 25% improvement in numeracy scores for students using digital learning tools. The study concludes that while EdTech has potential benefits, challenges related to infrastructure and teacher training need addressing for widespread adoption in DRC's ECD settings. Policy recommendations include investing in teacher training programmes aligned with EdTech use, improving access to technology in underserved regions, and fostering community engagement to support digital literacy among parents and caregivers. Educational Technology, Early Childhood Development, Cognitive Skills Improvement, Democratic Republic of Congo

**Keywords:** *Cognitive Development, Early Childhood Education, Educational Technology, ICT in Education, Quantitative Research Methods, Geographic Information Systems, Socioeconomic Indicators*

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