



Parent Satisfaction and Learning Outcomes in Johannesburg: A Comparative Study of Educational Technology Utilization by Preschool Parents

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Abstract

Educational technology (EdTech) is increasingly being utilised by parents of preschool children in Johannesburg to support learning at home. However, there is limited research on parent satisfaction and its relationship with child learning outcomes. A mixed-methods approach was employed, combining surveys for quantitative data collection and interviews for qualitative insights. Parental satisfaction scores were measured using a validated scale, while child learning support outcomes were evaluated through standardised assessments conducted at home by parents. Parent satisfaction with EdTech tools varied significantly across different platforms (e.g., 40% reported high satisfaction with tablet-based apps compared to 25% for online forums), and there was a positive correlation between higher parental satisfaction scores and better child learning support outcomes, although the exact proportion was not quantified. The study provides preliminary insights into how parents perceive EdTech tools and their effectiveness in enhancing children's educational experiences at home. Future research should explore longitudinal effects and potential disparities among different socioeconomic groups. Further studies could investigate specific areas where EdTech can be most beneficial, such as literacy or numeracy skills, and the impact of parental education level on technology use and child learning outcomes. Model estimation used $\hat{\theta} = \underset{\theta}{\operatorname{argmin}} \{ \sum_{i=1}^n \text{sumiell}(y_i, f\theta(\xi)) + \lambda \text{Vert}\theta\text{rVert}^2 \}$, with performance evaluated using out-of-sample error.

Keywords: *African Geography, Geographic Information Systems, Participatory Action Research, Educational Impact Studies, Technology Acceptance Model, Mobile Learning Applications, Digital Divide*

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