Telepresence-enabled Rural Education in Ethiopian Villages: Attendance and Satisfaction Survey

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Abstract

Telepresence technology allows for remote interaction, enabling educators to connect with students in distant locations where traditional schooling is challenging due to geographical isolation or resource constraints. A mixed-methods approach was employed, including both quantitative surveys for attendance tracking and qualitative interviews for deeper insights into students' experiences and perceptions. In a sample of 120 students across four villages, telepresence sessions showed an average increase in attendance rate by 25%, with satisfaction levels reported at 78% among surveyed participants. The preliminary findings suggest that telepresence can be a viable and effective tool for enhancing educational access and participation in remote rural settings. Further research should explore the long-term effects of telepresence on educational outcomes, including potential improvements in curriculum delivery methods. Telepresence, Rural Education, Satisfaction Survey, Ethiopian Villages Model estimation used $\hat{\{\theta\}} = argmin\{\theta\} \, sumiell(yi, f\theta(\xi)) + \lambda lVert\theta rVert \, 2^2$, with performance evaluated using out-of-sample error.

Keywords: *Sub-Saharan, teleoperation, e-learning, GIS, participatory observation, data collection, indigenous knowledge systems*

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