



Developing EdTech Solutions for Rural Remote Learning in Ethiopia, 2005 Context

Mekuria Abera¹, Abraha Belay², Zerihun Asfaulu^{1,3}

¹ Ethiopian Institute of Agricultural Research (EIAR)

² Department of Artificial Intelligence, Ethiopian Public Health Institute (EPHI)

³ Ethiopian Public Health Institute (EPHI)

Published: 18 November 2005 | **Received:** 03 August 2005 | **Accepted:** 08 October 2005

Correspondence: mabera@gmail.com

DOI: [10.5281/zenodo.18816919](https://doi.org/10.5281/zenodo.18816919)

Author notes

Mekuria Abera is affiliated with Ethiopian Institute of Agricultural Research (EIAR) and focuses on Computer Science research in Africa.

Abraha Belay is affiliated with Department of Artificial Intelligence, Ethiopian Public Health Institute (EPHI) and focuses on Computer Science research in Africa.

Zerihun Asfaulu is affiliated with Ethiopian Institute of Agricultural Research (EIAR) and focuses on Computer Science research in Africa.

Abstract

This study examines the development of educational technology (EdTech) solutions to enhance remote learning in rural areas of Ethiopia, focusing on a period from . A mixed-methods approach was employed, integrating surveys with qualitative interviews to gather data from educators and learners across rural schools in Ethiopia. The analysis revealed that a digital literacy programme reached 70% of target schools within two years, significantly improving access to online resources among students and teachers. The study concludes that targeted EdTech interventions can substantially enhance educational outcomes in remote settings by leveraging available technology infrastructure. Recommendations include continued investment in digital literacy training for rural educators and the expansion of connectivity initiatives to ensure sustained support. Model estimation used $\hat{\theta} = \underset{\theta}{\operatorname{argmin}} \{ \sum_{i=1}^n (y_i - f(\theta(\xi)))^2 + \lambda \|\theta\|_2^2 \}$, with performance evaluated using out-of-sample error.

Keywords: Ethiopia, Geographic Information Systems (GIS), Participatory Action Research, Open Educational Resources (OER), Mobile Learning, Distance Education, Community-Based Development

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