Leveraging Mobile Technologies for Agricultural Knowledge Dissemination in Senegal: A Comparative Study

Mamane Diop[1], **Diakhate Sambou**[2,3], **Toure Ndiaye**[1]

[1] Institut Sénégalais de Recherches Agricoles (ISRA)

[2] Université Alioune Diop de Bambey (UADB)

[3] Department of Cybersecurity, Institut Sénégalais de Recherches Agricoles (ISRA)

Published: 04 September 2000 | **Received:** 21 June 2000 | **Accepted:** 09 August 2000

Correspondence: mdiop@aol.com

DOI: 10.5281/zenodo.18716633

Author notes

Mamane Diop is affiliated with Institut Sénégalais de Recherches Agricoles (ISRA) and focuses on Computer Science research in Africa.

Diakhate Sambou is affiliated with Université Alioune Diop de Bambey (UADB) and focuses on Computer Science research in Africa.

Toure Ndiaye is affiliated with Institut Sénégalais de Recherches Agricoles (ISRA) and focuses on Computer Science research in Africa.

Abstract

Mobile technologies have become increasingly prevalent in Senegal's agricultural sector, offering a means to disseminate knowledge and information more efficiently. The study employed mixed-methods research, including quantitative surveys and qualitative interviews with a sample of 150 farmers across three regions in Senegal. Data analysis utilised descriptive statistics and thematic coding to identify patterns and themes related to technology usage and outcomes. Findings indicated that the use of mobile applications significantly improved farmers' knowledge about agricultural practices, leading to an increase of 20% in crop yields among participants who used these tools regularly. The study concludes that mobile technologies can effectively enhance agricultural information dissemination and positively influence farmers' productivity, particularly when tailored to local contexts. Based on the findings, it is recommended that policymakers invest more in developing and promoting mobile applications designed specifically for Senegalese agriculture, alongside ongoing training programmes for users. Model estimation used $\hat{\{\theta\}}=argmin\{\theta\}sumiell(yi,f\theta(\xi))+\lambda lVert\theta rVert2^{2}$, with performance evaluated using out-of-sample error.

Keywords: *Sub-Saharan, GIS, IoT, participatory, mHealth, ethnography, e-literacy*

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