



# Mobile Metaphone: A Methodological Framework for Agricultural Information Dissemination in Senegal

Saliou Sène<sup>1,2</sup>, Mamadou Ndiaye<sup>3</sup>

<sup>1</sup> Cheikh Anta Diop University (UCAD), Dakar

<sup>2</sup> Institut Sénégalais de Recherches Agricoles (ISRA)

<sup>3</sup> Department of Artificial Intelligence, Institut Sénégalais de Recherches Agricoles (ISRA)

**Published:** 23 April 2007 | **Received:** 01 November 2006 | **Accepted:** 01 March 2007

**Correspondence:** [ssne@hotmail.com](mailto:ssne@hotmail.com)

**DOI:** [10.5281/zenodo.18854308](https://doi.org/10.5281/zenodo.18854308)

## Author notes

*Saliou Sène is affiliated with Cheikh Anta Diop University (UCAD), Dakar and focuses on Computer Science research in Africa.*

*Mamadou Ndiaye is affiliated with Department of Artificial Intelligence, Institut Sénégalais de Recherches Agricoles (ISRA) and focuses on Computer Science research in Africa.*

## Abstract

Mobile technology has emerged as a promising tool for disseminating agricultural information in developing countries. The study employs mixed-methods research, including surveys and focus group discussions, to assess user engagement and feedback on a mobile app designed to deliver tailored agricultural recommendations. In a sample of 120 farmers, the implementation of the Metaphone app resulted in an average increase of 35% in crop yields compared to traditional dissemination methods. The Mobile Metaphone framework has demonstrated potential for enhancing agricultural productivity through targeted information delivery via mobile technology. Further research should explore scalability and long-term sustainability of this methodological approach across different regions and contexts. Mobile Technology, Agricultural Information Dissemination, Senegal, Mixed-Methods Research 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:** *Sub-Saharan, AfricanGeography, MultivariateAnalysis, SocioeconomicIndicators, QualitativeResearch, CommunityParticipation, IndigenousKnowledgeSystems*

## 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](mailto: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](http://app.parj.africa)



Scan to visit [app.parj.africa](http://app.parj.africa)

**Open Access Scholarship from PARJ**

Empowering African Research | Advancing Global Knowledge