How mobile apps are transforming smallholder agriculture: Appropriation of mobile apps for fulfilment of smallholder farmers' interests

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Background

- Smallholder farmers (SHFs) in South Africa face challenges of limited access to information, inputs, and commodity markets.

- There is growing focus on mobile apps to improve smallholders' access to vital agricultural information and markets, thereby tackling the key challenges faced by SHFs.

- This research critically examined the ways in which mobile apps are transforming agriculture for SHFs access to information in South Africa.

Methodology

- The multiple case study methodology guided by the critical theory of technology and self-determination theory was used.

- Four mobile apps, forty-two SHFs using the apps and four mobile app administrators were purposively selected.

- Data analysis was conducted using Atlas.ti.

- Themes were generated from the literature review and from the data.

Findings

- SHFs exercise their agency to appropriate Facebook and WhatsApp groups for exchanging agricultural information and linking each other to informal markets.

- The user-generated content affordances of Facebook and WhatsApp groups enable the creation of spaces where SHFs converge and exchange of valuable information.

- Farmers utilize Facebook groups and WhatsApp groups to connect to informal markets where they have control over the pricing of their commodities.

- This reflects a defiance of traditional reliance on formal markets where they are price takers and highlights SHFs' assertion of control and autonomy over their agricultural marketing activities.

> "Because I'm in this Facebook group with many farmers it's easier for me to advertise my day-old chicks. Because others are there to sell and some are there to buy so it's better to advertise using this type of platforms."

(Interview with Mashudu, Facebook Group, 13 March 2023)
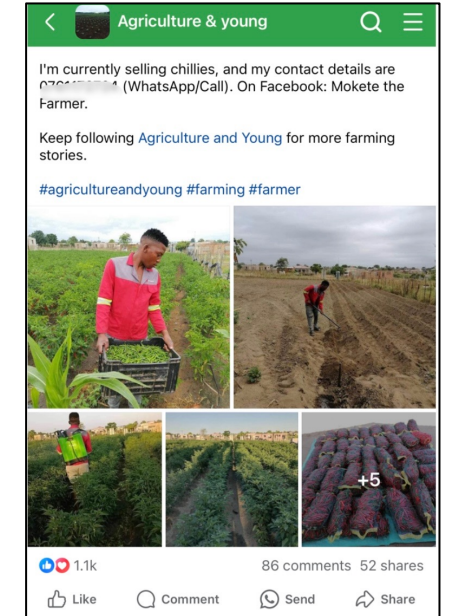
Highlight

- Mobile apps can only be appropriated to the extent the design permits, whereby mobile apps which do not permit user-generated content limit farmers' ability to adapt the apps to suit their specific needs and contexts.

Conclusion

Apps that permit user-generated content empower SHFs from being passive consumers of technology into active participants that shape their digital engagement to meet their specific needs and goals.