Effective Training through a Mobile App: Evidence from a Randomized Field Experiment

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Study Setting and Intervention

- **Adoption of New Technology and Better Farming Practices Have Challenges**
  - Farmers in developing countries usually lack access to vital resources and services
  - Agricultural extension services are important to overcome these deficiencies (including technical training)
  - Can reduce poverty by providing information and transferring knowledge to farmers
    - Evidence and Feder 2009, Nakasone et al. 2014

- **However**, traditional extension services have high fixed and recurrent financial costs (Casaburi et al. 2021, Koesoemardjo 2018)
- **These limit their scalability and efficiency**

**Rapid Expansion of ICTs Offers Great Potential**

- **ICT-based solutions may offer an alternative**
  - Radio, television, computer, mobile phones, etc.
  - May help increase farmers’ awareness of best practices

- **Mobile phones are one of the fastest-growing and most widespread forms of ICT**
  - The roll-out of extension programs through ICTs is still in an early stage

- **Little research is available regarding such programs’ impacts**
  - Evidence from a Randomized Field Experiment

**Is Technical Training Through A Mobile App An Effective Method?**

- **We provide farmers technical training through an easy-to-use mobile application**
  - Certain kinds of information may be too complicated to convey by text or video (Fafchamps et al. 2016)
  - Our mobile app addresses this issue by providing information and demonstrations through videos

- The app records what, when, and how long a farmer watched each video in our app

- Our app also provided aspirational videos via the same app
  - Aspirational videos may enhance farmers’ psychological well-being (Bekkers et al. 2005)
  - They could also facilitate or complement learning among farmers’ families (Bekkers et al. 2016)

- **We conduct an experiment to examine whether the training improves farmers’ knowledge and the quality of their farm product**

**Motivation**

**Technical training through our mobile app improves knowledge**

- Technical test score ↑ 0.52 SDs
  - Farmers believe that their grapes are sweeter
  - May help increase farmers’ awareness of improved practices

- **Helps them enhance the quality of their produce**
  - Technical training (ITT): Grape sweetness ↑ 0.30 SDs
  - Treatment-on-the-treated (TOT): Grape sweetness ↑ 0.55 SDs

- **Larger effects for higher percentage of videos watched**

**Take Away**

- Providing training through apps is an effective delivery method
  - Farmers can learn technical skills through a mobile app

- It also helps farmers enhance the quality of their produce
  - Can be an effective alternative to traditional extension service

**Cost of our whole experiment, including developing the app and watch bonuses**

- Technical videos only: $27.5 per farmer
- Technical videos and aspirational videos: $31.7 per farmer
- Average cost diminishes the longer the farmers use the app

**References**


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