

LECTURE 8

APPROPRIATE TECHNOLOGY (CONT'D)

Case Study II: Africa

Africa presents an intriguing case of the redesign of information and communications technologies (ICTs) to serve the particular needs of the African poor. Despite its status as part of the developing world, Africa has been the fastest growing mobile market in the world between 2000 and 2005. Nearly two-thirds (65%) of households in 23 countries in sub-Saharan Africa had at least one mobile phone in 2013. The rapid integration of mobile devices into low-income communities has surprised many researchers and analysts, but even more remarkable is how mobile technology has been transformed to serve uniquely African development needs, in conjunction with its conventional function as a telecommunications device. In fact, it is estimated that almost 80% of rural African households regularly use mobile phones in many ways other than as an infrastructure service.

Specifically, mobile phones have been utilized as a financial or investment sector service, or as a market, weather, and health information exchange mechanism. In Mozambique, for instance, farmers access information provided by the state Agricultural Marketing Service about current market information and product processing and availability on their mobile phones. In Kenya, the Agricultural Commodity Exchange developed a service called "SMS sokoni" that allows shareholders to view daily agricultural commodity prices and gives them opportunities to sell or bid, all through text messages. In both of these cases, and in others, increased access to market information has positively impacted the economic situation of the African poor.

Several factors are believed to contribute to the rapid proliferation of mobile technology in Africa. First of all, mobile phones involve lower overhead and installation costs and are more easily introduced than fixed-line telephones. The mobile phone lends itself to communal use, so that families and neighbors can all benefit from the device while paying for only a portion of its cost. Finally, the creative uses for which mobile phones have been used have helped make it an appropriate technology for Africa and its people. Though not originally intended to provide

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additional services, this is nonetheless an excellent example of how technology can be shaped to the specific needs of a developing economy.

Read more on the following AT projects

i) Water Systems

Simple, hand-operated water pumps and solar-powered pumps for domestic use and irrigation

Hydraulic ram pumps for pumping water uphill

ii) Transportation

Bicycles and tricycles for personal and cargo transportation

iii) Energy

Wind power for generating electricity

Photovoltaics for generating electricity from solar power

Small-scale hydropower systems for generating electricity

Biogas systems for using methane from animal manure

iv) Construction And Architecture

Low-cost, labour-intensive materials for construction (straw bale, cob, rammed-earth blocks)

- Architectural designs for passive solar or earth-sheltered buildings
- Solar architecture for heating the building
- Pedal-powered tools for building (band saws and drill presses)

Activity

a. Write a list of common technologies you use. Indicate which ones you could live without, if you had to. Which ones, if any, have negative impacts? Is there such a thing as good or bad technology? Do these technologies reflect your values?

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b. Think about your community and identify one example of AT in use and one example of applications where AT could be used.

c. Individually or in a small group, think about starting your own NGO with a focus on AT. What would be the purpose of your group? What part of the world would you work in, and what situation and problem would you address? How would you respect the local culture and environment