Chapter 16
Community-Based Development of Knowledge Products

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ABSTRACT
International organizations and government agencies have developed and collected a wealth of knowledge resources relevant to poor communities; however, the people who need these resources most often do not know these materials exist or are unable to access or understand them. Electronic sources of knowledge materials and means of communication are rarely integrated with traditional methods of knowledge delivery. This paper addresses the issue of knowledge sharing with poor communities and presents a software tool for developing multimedia knowledge materials suitable for people with little or no formal education. A multimedia editor uses a data structure composed of multimedia objects (texts, images, video, and audio clips) to generate the knowledge browser. Local specialists with a basic knowledge of computing can modify and customize how the knowledge is presented by adding new materials relevant to the local environment.

INTRODUCTION
A body of knowledge built in a community over generations plays an important role in solving contemporary problems. However, this knowledge alone may not be sufficient to deal with the rapidly changing world within and around the community. New problems arising from changing market structures, the introduction of new methods in agriculture, health care problems, social changes, and the activities of government and global development programmes require knowledge from external sources - the knowledge that will help the communities adapt to change. These external
sources constitute an essential factor in empowering communities and disadvantaged social groups. The empowerment through knowledge is the most visible and meaningful at the community level.

Disadvantaged and poor communities must be made aware of availability of knowledge services and their rights to benefit from country and global knowledge resources. We need effective methods and tools for production of knowledge materials based on existing sources of knowledge such as printed publications and electronic materials made available on the Internet as well as on sources of indigenous knowledge.

The external materials must be transformed (translated, localized and contextualized) into knowledge presentations that are appropriate for diverse communities in developing countries. Most of the members of these communities have very little or no formal education or are illiterate, and speak only their mother’s tongues. The main purpose of this paper is to review the research issues that have arisen through field experiences in sharing knowledge with the poorest communities.

THE PROBLEM

This paper outlines problems of sharing knowledge at the community level. Figure 1 shows the scope of issues to be considered in the context of community knowledge management. Access to relevant knowledge or in many cases just knowing that needed knowledge is available is one of the critical issues for development initiatives. In order to reach remote and poor communities with large illiterate and semi-literate population we must design appropriate knowledge delivery methods, for example interactive theatre and visual presentations using traditional or electronic channels of communication. Knowledge materials must concern very specific local issues and be delivered in local languages.

A short story about a farmer in Mindanao, Philippines is an example of the importance of knowledge sharing in a community and the role of modern electronic means of communication. The farmer visited a village that had just established a telecentre. A group of people was looking at the computer screen. He joined them to watch a presentation in his language on how to raise ducklings. He liked the story and tried to apply the newly acquired knowledge. Now, he is one of the richest farmers in his village. (Mikolajuk, 2004)

The story is not about the telecentre but about how important it is to access relevant knowledge in an appropriate format. A brochure, or radio broadcast or a lecture from an extension worker may not have had the effect of the telecentre. Most likely, if there were other duckling breeders around, the farmer would have learned from them instead. Nonetheless, new knowledge was delivered effectively. But this required that someone with the required knowledge packaged it in the appropriate format and reached the farmer.

The knowledge needed by poor communities often already exists somewhere, but it is usually not available at the right time and the right place to those who need it most. To identify key factors to improving knowledge services, Practical Action, in collaboration with several universities, conducted analyses of knowledge gaps and of the demand for knowledge in rural communities in Bangladesh (Practical Action Dhaka, 2007) and Sudan (Abdelaziz, 2008) and (Practical Action Khartoum, 2009).

Some of the main questions of community knowledge management are:

- What are the community knowledge assets and needs and how can they be recorded and preserved?
- What are the traditional means of knowledge sharing and is there a need for new methods or a convergence with electronic media?
- What are the domains where traditional knowledge needs to be supplemented by new sources of knowledge?
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