

# IK Notes

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## Uganda: Information Technology and Rural Development

### *The Nakaseke Multi-Purpose Telecenter*

It is often said that modern technology tends to bypass local communities found in remote regions. However, some recent technological advancements in communications have begun to blur geographical distances and infra-structural bottlenecks. Located 50 kilometers north of Kampala, Uganda, in a remote village, the Nakaseke Multi-Purpose Community Tele-center has introduced new information and communication technologies to this rural area. In three years, the Telecenter has catalyzed a number of development activities in the region.

Nakaseke sub-county has a population of over 38,953 of which 18,617 are women. Nakaseke town itself has a population of 3,000 people, most of whom are the Baganda — the biggest tribe in central Uganda. The community is largely oral and does not have a established reading culture. Till the Telecenter started in 1997, newspapers were only available in the next town 16 kilometers away and connected by a rough road.

The Nakaseke Telecenter is part of a chain of five donor (UNESCO/IDRC/ITU) supported Telecenter projects initiated in Benin, Mali, Mozambique and Tanzania. The overall objective of the project is to stimulate rural development by facilitating access to information, learning resources and communication technologies by the Nakaseke and Kasangombe communities and support improved medical services through telemedicine.

Current activities include computer applications training, and Internet, e-mail, telephone, fax, library, and photocopying services, an Open Learning Center (for outreach), topical video shows and audio recordings and community listening and newspapers, as well as leisure and sports activities for young people.

While the Telecenter aims at serving the entire communities of Nakaseke and Kasangombe, it focuses on the following core user groups: women, youth, children, medical, workers, teaching staff, farmers and local leaders. The content and programming for the Telecenter is therefore tailored towards meeting primarily the needs and aspirations of these groups.

#### Implementation strategy

The participation and involvement of the community is central to the implementation of the Telecenter's activi-

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ties. Since it was started, the community has been at the center of the planning and execution of the all activities. A Local Steering Committee was elected from and by the community representing each of the core target groups to:

- supervise the Telecenter's daily activities
- liaise with the Management Committee
- mobilize the community to participate in all activities and programs, and
- steer community ownership programs and involve the community in any activities that promote the sustainability of the Telecenter, including organizing fundraising activities.

### Impact

The community has access to a modern library/resource center, telephone connectivity and an Information Communications Technology (ICT) core unit for all ICT-related activities/services.

The multi-purpose Telecenter has transformed the lives of the local community. It has provided internet, telephone and fax services that are being utilized to conduct local business activities. Computer training has provided jobs for the youth, who now have access to a fully-fledged library with major international journals and books. Farmers have begun to engage in on-line trading and use the Tele-center to capture and disseminate information about local farming techniques and crop prices. The Telecenter has begun to implement an Indigenous Knowledge Program in collaboration with local farmers, which could be utilized as an affective focal point to conduct community to community exchanges. Farmers are now requesting for market rates and general trends regarding the crops they grow.

The school community (7,000 school children) as well as community workers and medical officers have benefited from the resource center. The community (42 villages and 3,000 households) is gradually appreciating the importance of information as evidenced by the growing number of people inquiring about information on a variety of issues. The daily newspapers available at the Telecenter have also helped to keep the community up to date with what is going on in the rest of the country.

### Agricultural project utilizes indigenous knowledge

While Uganda's population is expected to double over the next 30 years however, a necessary and corresponding increase in agricultural growth is a cause for concern. The present low agricultural growth has been attributed, among other things, to poor Research-Extension- Farmer linkages and ineffective technology delivery systems, including poor or inefficient information and communication packaging and delivery systems.

The agricultural project aims to:

- increase overall agricultural productivity and household incomes in Nakaseke and Kasangombe Sub- Counties.
- support agricultural extension workers in providing information and guidance to the farming community.
- directly link research work and farmers' units, thereby enhancing the flow of information from both sides. Inter-

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national, national and local institutions will be linked to the Telecenter as the hub for agri-consulting.

- provide a forum for experimentation on the use of ICT to deliver timely agricultural information and dissemination of research results.

From the beginning, the project incorporated local community knowledge into its organizational structure and framework. It established a special section in the library to gather and disseminate IK-related information, which was used to increase the responsiveness of local farmers to changes in government policy with a view to raising agricultural productivity at the regional level. A photographic display shed light on traditional approaches to natural resource management, savings and informal transfers and local medicinal approaches and applications.

Over the last three years, through a process of trial and error, all actors involved have been trained to demonstrate a high degree of adaptability. Several community-based workshops and study tours were organized to train local farmers to understand and anticipate fast-moving trends so as to adopt the correct response strategies.

Field research was conducted to understand and appreciate indigenous approaches to farming, which focused on the complexity, diversity and risk prone approaches of many farming systems. The study tours effectively showcased the knowledge, professionalism and rationality of small and poor farmers. A series of formal and informal discussions brought out their experimental mindset behavior and ability to conduct their own analysis.

The accessibility, diversity and timely relevance of information were key elements for enabling all parties to adapt and make a change for the better. Different modes of communication such as internet, telephone and fax determined the extent to which the process of dialogue, negotiation and communication, between the different parties involved, was strengthened. The Telecenter played a key role as a facilitator, by connecting Nakaseke to other parts of the country/world and vice-versa. For the first time, the local community could engage in an ongoing dialogue with other communities and share their experiences.

## Impact

- Extension agents, NGOs and farmers are well-trained in the use of ICT.
- Relevant agricultural information are accessed and developed in collaboration with at least three research institutions. Technologies and crops include post harvest, banana, coffee, horticulture, root crops and cereals
- Training manuals, information brochures, guides leaflets and posters are developed.
- At least 65 percent of farmers in Nakaseke and Kasangombe are exposed to this approach and 98 percent of agricultural extension agents and community development workers are involved.

In addition to agriculture, the Nakaseke Telecenter has developed a series of projects that utilize the knowledge and expertise of local communities particularly in the fields of education, gender and healthcare. This includes an innovative Tele-Medicine Program being developed in collaboration with the Nakaseke Hospital. Once in operation, the idea is to be able to link local patients with medical practitioners in Kampala and other cities and vice-versa. This could prove to be an effective forum to mainstream the use of traditional medicine being practiced widely across Africa. In this way, Tele-centers could serve as a platform for capturing and documenting indigenous knowledge and disseminating it from one local community to another.

## Lessons learned

Involving the community at an early stage in the planning and implementation of the project helped to mainstream Telecenter issues into the general activities of the community. Localizing the ICT applications to a level that is understandable to all community members helped to sell the Telecenter concept. This was achieved through translating information packages into Luganda - the dominant local language of the community. Illustration of new concepts and programs is the key to deep appreciation and understanding, especially if it concerns an illiterate community. It is vital to recruit local "sons and daughters of the soil" to manage the

daily operations. They know the community better than any other expert and communicate in the 'language' that the people understand.

Nakaseke is a successful example of transferring the maintenance costs from donors to the local communities, thereby moving towards sustainable local ownership. The community has successfully, out of their own tax collections elected a permanent building for the Telecenter and found other sources of funding to support the construction work. It also lobbied the government for a new telecom tower to facilitate the connection of over 50 new telephone lines in the region. This confirms the extent to which rural communities appreciate the value of information in the development process.

### **The challenges ahead**

In a new initiative like the Telecenter, there is a critical need for documentation. It offers numerous tools that could be effectively used to document the rich diversity of indigenous knowledge in the region. The process has begun by training researchers in ethnographic research methods and developing a methodology for data gathering and recording in a databank. This is being achieved through the use of audio-visuals and by recording views in written documentary.

The next step is to develop a framework for information dissemination, sharing and networking. The process has begun through forging practical linkages within ICT initiatives in and out of the country. The Tele-center has begun a plan to share documentation systems and record keeping with other Telecenters involved in the pilot within the country.

Additional programs are being developed to mainstream the knowledge captured by the Tele-center, including one on community trade and business practices. The program will empower local traders with the ability and insight to appreciate and critically analyze their commercial environment, with a view to cultivate a savings culture and control expenditure. The focus will be on documenting and mainstreaming indigenous entrepreneurial practices and applications.

*This report was written by Siddhartha Prakash, World Bank Consultant, based on a field visit to the Nakaseke Multi-Purpose Tele-Center in May 2000.*

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