# CHAPTER 15

# THE ACACIA PROGRAMME: DEVELOPING EVALUATION AND LEARNING SYSTEMS FOR AFRICAN TELECENTRES

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*"L'information est la clé de toutes les portes."*
*Telecentre user in Timbuktu*

## BACKGROUND

The Acacia Programme on Communities and the Information Society in Africa is an initiative of the International Development Research Centre (IDRC), designed "to empower sub-Saharan African communities with the ability to apply information and communication technologies [for] their own social and economic development." The idea for Acacia originated during the 1996 Information Society and Development Conference held in South Africa, the first international conference convened in a developing country to consider the potential of the new ICTs for development. Conference delegates noted a link between the information society and community development in Africa and suggested that "through links at the community level, a Global Information Community governed by people-centred development values could evolve within the more commercially oriented Global Information Society." Meanwhile, African governments had also recognised the potential contribution of ICTs to African development, and had established the African Information Society Initiative (AISI).

Acacia was planned as the IDRC's contribution to the AISI and the project was named after the Acacia tree which is found throughout sub-Saharan Africa. To develop and test models of community access, Acacia identified four core themes: policy, infrastructure, tools and technologies, and applications. Women and youth are high priority target groups. As a research initiative, Acacia was intended to bring together community-based learning and more traditional evaluation within a single interactive framework. Thus, Acacia includes a major evaluation and learning systems component. Its goal is to use systematic and participatory evaluation to learn about the applications and effects of

Acacia projects, and to share what is learned with local stakeholders and other Acacia projects, as well as African governments, non-governmental organisations (NGOs) and other development agencies and groups with an interest in this field. During 1998 – 99, the author served as Co-ordinator of Evaluation and Learning Systems for the Acacia Programme.

Telecentres are only one of Acacia's ICT (information and communications technology) initiatives. Others include such activities as school networks, environmental applications, connectivity for women's organisations, telemedicine pilot projects, and youth-focused ICT initiatives, as well as policy studies, primarily focused on the steps needed to make affordable access to ICTs widespread in Africa. However, the telecentres are perhaps the most visible of Acacia's initiatives, as they are designed specifically for community access. Acacia has established telecentres on its own in Uganda, in collaboration with the Universal Service Agency in South Africa and with the International Telecommunications Union (ITU) and UNESCO in Mali, Mozambique (a project described by Polly Gaster in Chapter 11) and Uganda. Jointly sponsored telecentres are also being implemented in Benin and Tanzania. These projects are referred to as "multipurpose community telecentres" (MCTs) and are equipped with a variety of facilities including pay telephones, fax, photocopiers and several computers equipped with basic software and connected to a telephone line through which e-mail and, in most cases, the Internet and Web can be accessed. The centres are intended to stimulate and support (1) local capacity for informed decision-making, particularly in the areas of health, education, economy, governance and general socio-economic development, and (2) the production of information to foster local development. In general, the projects are designed to develop sustainable models to meet the information and communication needs of the communities, with the assumption that these models will likely evolve during and following implementation.

This chapter focuses on the telecentres in Mali and Uganda where a participatory model of evaluation was introduced and replicated. More information on the evaluation methodology and models used by Acacia are described in Chapter 16 of this book ("Telecentre Evaluation: Issues and Strategies") by the same author.

The initial phases of the methodology were pilot tested and baseline data were collected for the telecentres in Timbuktu, Mali, in December 1998, and Nakaseke, Uganda, in March 1999. (Further information on the Nakaseke Multipurpose Community Telecentre is provided in Chapter 10 of this book.)

The methodology was adapted by researchers from the Makerere Institute for Social Research, who used similar techniques and instruments to conduct baseline studies in Buwama and Nabweru, Uganda, in June 1999.

## EVALUATION METHODOLOGY

George Scharffenberger (formerly with the Pact Institute) explains how the evaluation methodology was designed to accommodate the needs for learning and evolution (Scharffenberger 1999a):

> This "rolling design" approach (akin to what is referred to as "action research") requires a strong learning system, a flexible and nimble management style, and adaptive management systems. … The learning system methodology used in Mali and Uganda integrates multiple data collection instruments that are sequentially implemented

> to obtain relevant data from a wide range of perspectives. The process is a highly participatory and one in which local stakeholders refine the various instruments and play key roles in data collection, analysis and subsequent project decision-making. The interlocking design of the instruments, their sequencing and the manner is which they are implemented provide opportunities to verify and deepen understanding of information coming from previous instruments.

The instruments consisted of:

- *Community survey* — A questionnaire was designed to provide a quantitative overview of community information and communications needs, priorities and use patterns. It included sections on basic demographic data, access to ICTs, the information needs of the respondents (both to receive and transmit) and the current means of communicating and accessing information. The surveys were administered to stratified samples of several hundred people in six high-potential user groups.
- *Focus groups* — Six focus group discussions were held at each site, each representing a key user or stakeholder group related to the MCT pilot project's objectives. The methodology used focus group facilitation techniques, with emphasis on exploring the diversity of viewpoints rather than pushing towards a consensus. In addition to the facilitator and recorder, several people (including telecentre staff) observed and recorded pertinent statements using a table format to facilitate aggregation and reporting.
- *MCT management workshop* — A facilitated workshop allowed the telecentre's community management committee to review the information coming in from the other instruments and add their perspectives. The outputs from this were to be decisions on MCT operations and services and the development of key performance indicators for the MCT.
- *Log sheet* — Each MCT has established logs to track ongoing usage of the telecentre, including demographics of users (gender, age category, occupation) and services used.

This methodology is intended to serve as a learning system to provide project managers with ongoing input that they can use to guide the operations of the MCTs. Monthly analysis of the log sheets shows trends in usage patterns, and periodic repetitions of the survey and focus group discussion (it was proposed that these be carried out annually during the pilot phase) provide assessment of community satisfaction and concerns, as well as identifying developmental impacts of telecentre use.

A key feature of this methodology is its participatory approach. For example, local stakeholders participated in the questionnaire design, specifying topics of local importance, suggesting culturally acceptable questions for ascertaining age and income levels, and identifying potential user groups to be included in the sampling frame and focus groups. Telecentre staff and management committee members also participated in the data collection for the surveys and focus groups. This approach is unorthodox, as the conventional practice would be to use data collectors who have no connection to the project to avoid potential bias. However, it was felt that involving stakeholders would enable them to hear directly about the needs and aspirations for the telecentre from community members, and would help them to understand the approach of evaluation as learning. Furthermore, it would help address any cultural differences that might emerge between researchers and local people with their own means of understanding and communication. Also, as Scharffenberger (1999a) notes:

> One of the greatest challenges for all monitoring and evaluation (M&E) systems is gaining the co-operation of front-line managers…. The MCT Learning Systems methodology attempts to address this shortcoming with a model that more effectively fosters not only co-operation but also a sense of ownership of the M&E system by the MCT staff, local management committee and other local stakeholders. This includes a concerted effort to provide an understanding of the data system, of the data being collected and its ultimate use and, more importantly, opportunities to help decide what data is collected and how. The MCT system then goes one step further by giving local stakeholders key roles in data collection and analysis and supports the direct application of M&E results to local project decision-making. The goal is to provide local managers with an understanding of the direct usefulness and importance of M&E while fostering a deep sense that the process and data are owned by the local community.

To avoid the dangers of biased outcomes inherent in participatory research, it is important that experienced researchers oversee the design of the studies and train the local interviewers. For example, data gatherers need to understand the idea of a sample, so that they do not simply interview their friends or ignore people they don't know or those whose views they think will be similar to what they have already heard. They must also learn how to follow the interview protocol, avoid the use of leading questions, and record responses accurately. The Acacia evaluations demonstrated that these skills can be readily taught, and that local people cannot only collect data reliably but also learn from the evaluation about the information needs and perceptions of the community.

The baseline evaluation itself raised awareness of the telecentre in the community. In fact, the surveys and focus groups actually served as a form of market research in identifying community information needs, training needs, preferred hours of operation, and willingness to pay for services. As Scharffenberger (1999a) observed, "To a considerable degree, the success and sustainability of the MCTs will be determined by the ability of their management to gauge the evolving information/communication needs of the community and to adroitly adapt MCT services in consequence. The mastery of what are essentially market research skills (sampling and survey skills, interview techniques, focus group facilitation skills, and organizational capacity self-assessment) was one of the baseline data collection exercises' most significant outcomes."

It was hoped that this participatory approach would create an understanding of the importance of ongoing assessment as a means of improving the projects and increasing the likelihood of long-term sustainability. In fact, it appears that this appreciation of evaluation as learning has taken hold among the projects' managers. At an evaluation workshop sponsored by Acacia in December 1999, the managers of the MCT projects in Mali, Uganda and Mozambique brought summaries of their log data, and each noted that they had found the information useful in assessing the reach of their services. The manager responsible for Timbuktu said that he had identified the most frequent users of the telecentres and sought them out to get feedback on what other services they might need and how to get others involved. The UNESCO project manager in Uganda observed that fewer women were using the telecentre than anticipated, and that he was working on strategies to increase female participation. The workshop participants also exchanged experiences on strategies that had worked at each site, and agreed to share data on an ongoing basis. The following section presents highlights of the Mali and Ugandan evaluations.

# THE MALI AND UGANDA EVALUATIONS

## *Timbuktu, Mali*

Landlocked Mali is the largest country in West Africa and among the world's poorest countries, with 65% of its land area desert or semi-desert. Economic activity is largely confined to the riverine area irrigated by the Niger. About 10% of the population is nomadic and 80% of the labour force is engaged in farming and fishing. Industrial activity is concentrated on processing farm commodities. The country, dependent on foreign aid, is vulnerable to fluctuations in world prices for its main export, cotton. Mali may be a poor country, but it has a rich heritage with more archaeological sites than any other African country except Egypt.

The fabled city of Timbuktu was once a trading crossroads and the world centre of Islamic learning and culture. Now much smaller and no longer on the shores of the Niger River, which has changed its course, Timbuktu remains an important regional trading centre of about 20,000 people on the edge of the Sahara, some 690 kilometres northeast of Bamako, the capital of Mali.

SOTELMA, the Malian telecommunications operator, provides service to Timbuktu via satellite, leasing capacity on Intelsat. SOTELMA is a partner in the Timbuktu telecentre project, and has provided three hours per day of free Internet access during the pilot project phase.

The telecentre was initially set up in a room in the hospital compound because of the availability of power and telephone lines. That location was not central, however, and the telecentre had since been moved to space in the main town square (la Place de l'Indépendance) next to City Hall (la Mairie). In fact, the Mayor is an avid booster of the telecentre, and has introduced a US$10 departure tax for all air passengers leaving Timbuktu to help support the telecentre.

For the baseline study, questionnaires were administered to 212 respondents, interviews were conducted with the leaders of 12 organisations, and six focus groups were held with residents expected to have high potential as MCT users: high school teachers, tourism operators, leaders of women's groups, artisans, medical professionals and youths.

Although Timbuktu is the most physically isolated of all the telecentres reported on here, the people were less isolated than might be expected in terms of their communication use. Fully 25% of those interviewed used the telephone at least once a week, while merchants and those in the tourism industry made frequent use of phone and fax. About 70% listened to the radio at least once per week, and 58% watched television (also transmitted by satellite and then rebroadcast locally) regularly. However, there was considerable dissatisfaction with communication facilities and services, with respondents citing unavailability, high cost and unreliability of access to information.

Communications use differs considerably among the various subgroups. Middle-aged men, especially civil servants and businessmen, used telecommunications and mass media the most, while women and younger, older and poorer groups were less likely to use these facilities. Women in public administration also stated that they were much less likely to have access to a telephone or fax at work than their male counterparts.

Information priorities among adults include education, professional development, religion and health; priorities for teenagers include health, religion and education as well as entertainment, news and sports. Timbuktu is still considered a major Muslim religious centre, and has several famous mosques that are more than 500 years old. Despite the reputation of Timbuktu as a conservative religious community, few people expressed concern that increased access to external information would be culturally harmful.

In general, the community was enthusiastic about the telecentre, expecting that it would reduce the cost of communications, increase access to professional information, and provide opportunities for the community of Timbuktu to make itself known to the outside world and create links with external partners and markets (Scharffenberger 1999b). In fact, early indications were that the telecentre was already beginning to fulfil these expectations. According to logs for a three-month period in 1999, the top three activities at the telecentre were computer use, e-mail and Internet access, and training in computer skills. The three largest user groups were students, staff of NGOs and medical staff from the hospital. About 35% of the telecentre users were women.

Given its original location at the hospital, health workers were identified as one of the target user groups. They clearly recognised the need for information, and most learned quickly how to use the facilities. A physician interviewed in the baseline study commented, "Information is the fuel of medicine. Here we have none. Year by year, we are falling behind." By the time the telecentre was moved to the town square, he was using e-mail and the Internet regularly to get medical information, and the medical staff had requested that at least one computer with Internet connection remain at the hospital. Other early adopters included a tour guide who had used e-mail to arrange a trip in the desert on camelback for visitors. School teachers were looking up materials for use in their classes; one of the teachers had noted that the schoolbooks were few and so old that he had no map of post-colonial Africa. The value of the telecentre was summarised by a woman who wrote in the log book: "L'information est la clé de toutes les portes" (Information is the key to all doors). This could well be the motto of the entire Acacia initiative!

## *Nakaseke, Uganda*

The Pact Institute's methodology was also used for the baseline study of the telecentre in Nakaseke, a rural community about 60 kilometres from the Ugandan capital, Kampala. The Republic of Uganda, with a population of almost 20 million, straddles the equator in East Africa. The Ugandan economy was devastated by the Idi Amin regime of the 1970s, the subsequent civil war, and the country's involvement in the civil unrest of the 1980s and 1990s in neighbouring Zaire. Uganda is now making a comeback, with strong recent economic growth. The country is overwhelmingly agricultural, with small farmers constituting over 80% of the workforce.

Nakaseke was chosen by the Ugandan government for this pilot project because its people and its infrastructure had suffered greatly during the recent civil war. The main economic activity in the area is subsistence agriculture. There is a hospital in the town and a teachers' college nearby. Nakaseke is relatively close to Kampala, but poor transportation is a major obstacle to travel and communication. It is 12 kilometres along a dirt road from the main highway, and there is no regular public transportation to the nearest market town, from which minibuses run to Kampala.

As in Timbuktu, the telecentre staff trained a "core user group" early on, consisting

mostly of young adults and school leavers. They, in turn, were to train others and to spread the word about the telecentre. They also assisted with the baseline evaluation. Also as in Timbuktu, the Pact consultant trained core users and staff of the telecentre to administer a questionnaire for potential users, conducted focus groups and organisational leader surveys, assisted the MCT project management to identify management and administrative issues, and helped the MCT staff to set up monitoring systems, including user logs and equipment maintenance and operations logs to track telecentre facility and service use. The Pact consultant also introduced the concept of a learning system and trained MCT staff and other stakeholders using participatory, community-based techniques.

In Nakaseke, the primary forms of communication were sending and receiving letters and listening to the radio. Those with more education tended to send and receive letters more frequently. The main purpose of communication was for social or family matters. More than 50% of the teachers, business people, civil servants and health and development workers reported sending information to Kampala as least quarterly. Letters were most commonly used, although messengers and personal travel were also cited. Only 4% reported using a telephone (an action that would have required travelling over the dirt road to the main highway and then to the nearest town).

Since most of the population (including women and young people) are farmers, their highest priority needs included information on markets, prices and new market opportunities; information on how to obtain inputs such as good quality seeds and breeding stock; and information on sources of capital. Small business proprietors said that they needed information on record-keeping. They also expressed interest in the computing and telecommunications facilities at the telecentre, but said that the businesses they dealt with did not have access to such facilities. The staff of the local hospital stated that they sometimes used taxis to send messages, which was expensive and not fast enough in emergencies. They also wanted continuing education and information on innovations in medicine, and they expressed interest in using the telephone, photocopier, and e-mail and Internet.

According to logs from a three-month period in 1999, the top three services used were access to videos, photocopying and access to periodicals. The top three occupational groups using the telecentre were students, farmers and health workers from the nearby hospital. Unlike for the other telecentres in this study, printed materials are a major component of the resources at the Nakaseke telecentre. One of the staff members is a librarian, and the centre has a collection of children's books, high school textbooks and development materials, and videos provided by The British Council. It also subscribes to several newspapers and magazines. High school students come to the telecentre to study, as most do not have textbooks of their own. Literate adults come to read the periodicals, and children come to watch videos. About 22% of the telecentre users during that three-month period were women.

## *Buwama and Nabweru, Uganda*

The same basic evaluation methodology was used to conduct baseline surveys at two other Acacia-sponsored telecentres in Uganda, at Nabweru, a periurban district about 6 kilometres from central Kampala, and at Buwama, an agricultural and trading centre about 60 kilometres from Kampala. However, responsibility for these studies was entrusted to Makerere University's Institute for Social Research, so that local researchers would take over responsibility for the evaluation of these projects, as well as for the next phases at Nakaseke.

The researchers used the same participatory approach, seeking consensus about the survey from community leaders and major stakeholders, and recruiting and training local people as well as telecentre staff to conduct the interviews. At each site, 500 respondents were randomly selected and interviewed (25 respondents from each of 20 villages selected from five nearby parishes). Interviews were also conducted with representatives of nine community organisations at each telecentre site, and eight focus groups were conducted with members of potential user groups at each telecentre site.

The Nabweru sub-county has a population of about 53,000 and is easily accessible to central Kampala. It is one of the fastest growing districts in Uganda. Trade, particularly retail, is the major economic activity; a significant number of adults are also salaried employees in Kampala. The telecentre is located in a building that also houses local government officials, and it is adjacent to a police station. The Buwama sub-county is larger and poorer than Nabweru, with a total population of about 350,000 and a literacy rate of only about 30%. Major economic activities are crop farming, particularly coffee and horticulture, and fishing and fishmongering. Subsistence agriculture is also prevalent. However, the town is situated on a main highway and has several coffee merchants and retail traders, as well as a post office and other government facilities. The telecentre is located in a building shared with an NGO and near local government offices.

In both communities, whose populations are young, more than 85% of the potential telecentre users were found to be under 45 years of age. Only those with at least primary education were able to read and write English; a higher percentage had completed primary school in periurban Nabweru than in rural Buwama. Both communities relied heavily on sending letters to communicate outside the community. Residents in Nabweru also used the telephone (public telephones were available), while people in Buwama depended on messages sent with travellers or commuter taxis (Kayabwe and Kibombo 1999).

As in the other locations, the survey itself served to inform the residents about the existence and services of the telecentre while giving the telecentre staff and interviewers a greater understanding of community information needs and expectations for the telecentre. At both sites, the business community was interested in information on prices, while women wanted information on healthcare and credit schemes, and youth were seeking information on sports, entertainment, and education and job opportunities.

## LESSONS LEARNED AND THE NEXT STEPS

The goals of Acacia's evaluation process are to provide useful feedback to project participants and to test Acacia's premise that access to ICTs will empower communities to take effective control over their own development. Evaluation and learning systems in Acacia are themselves subject to modification based on lessons learned in the pilot phase. It is intended that the evaluation process will be an ongoing activity of the telecentres, and that similar instruments will be used so that each telecentre can monitor its use and impact over time, and comparisons can be made across African telecentres. As noted above, a participatory model is key to this approach, as is simple ongoing record-keeping at each site. In addition, an e-mail newsgroup has been established for project managers and Acacia staff, which enables the projects to exchange data as well as discuss problems encountered and lessons learned.

The same methodology for the baseline surveys is to be used for the MCTs in Benin and Tanzania, with the project manager from Mali providing training and guidance in Benin

and the researchers from Makerere University assisting in Tanzania. It is intended that the baseline survey will be replicated at each MCT site from 12 to 18 months after the start of telecentre operations. Once again, MCT staff and other stakeholders are to be involved in the data collection, and results are to be fed back to them and to the community. In a subsequent application of the learning System model, Pact has experimented with the use of 3COM Palm Pilot computers (personal digital assistants) to replace paper questionnaires. The advantage of this method is that the data can be immediately uploaded to Access on a personal computer at the telecentre and made available for analysis by local stakeholders during the management workshop (Scharffenberger 1999a). The Mozambique project, described by Polly Gaster in Chapter 11, used a somewhat different methodology for its baseline survey, which predated the others and also served as a needs assessment. However, its research included demographic and economic data as well as information on user needs. Follow-up surveys are planned for that project, conducted with the aid of researchers from the University Eduardo Mondlane in Maputo where the project management is based.

To help ensure continuity, the Acacia Programme has also hired evaluation research associates, who are based at IDRC's regional offices in Dakar, Nairobi and Johannesburg. They will assist with implementation of the next steps of the evaluation and with the sharing and dissemination of findings. To build capacity in ICT evaluation research, Acacia will continue to contract with African universities and research institutes to conduct field studies.

While the approach to the evaluation was made as participatory as possible in the planning and data collection phases, it appears that there was perhaps not sufficient attention paid to giving the stakeholders back the results after the data analysis. The analysis was completed after the researchers left the community, and the reports were sent to the project managers. However, it may be necessary to develop a more interactive process whereby the researchers return to the community to explain and discuss the results of the research and its implications. It is hoped that with the involvement of in-country researchers and the new Acacia research associates, an approach that will integrate this step into the learning system can be developed. Finally, there is also a need to involve the National Acacia Advisory Committee members in the evaluation process. These bodies and their counterparts in other partner countries need to be briefed on the outcomes of the baseline studies and to contribute their views on issues that should be addressed in the next stages of the evaluation.

## REFERENCES

Hudson, H.E. (1999). "Designing Research for Telecentre Evaluation." In Proceedings of IDRC Workshop on Telecentre Evaluation: A Global Perspective, Far Hills, Québec, September 1999. International Development Research Centre, Ottawa.

Kayabwe, S.K. and Kibombo, R. (1999). *Buwama and Nabweru Multipurpose Community Telecentres: A Baseline Survey*. Makerere Institute of Social Research, Kampala, Uganda, October 1999.

Scharffenberger, G. (1999a). "Telecentre Evaluation Methods and Instruments: What Works and Why?" In Proceedings of IDRC Workshop on Telecentre Evaluation: A Global Perspective, Far Hills, Québec, September 1999.

Scharffenberger, G. (1999b). *Timbuktu Multipurpose Telecentre Baseline Survey: Community Information and Communications Profile*. Pact Institute, Washington, DC.

Versel, M.A. (1999). *Nakaseke Multipurpose Telecentre Baseline Survey*. Pact Institute, Washington, DC.

Whyte, A. (1999). *Telecentre Research Framework for Acacia.* International Development Research Centre, Ottawa.

### *Web References*

*www.idrc.ca/acacia*

*www.idrc.ca/pan/telecentres.html*