

CHAPTER 13

Is There an “E” in “Scaling Up”? Lessons from a Community Telecenter in Southwestern Colombia

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Introduction

Developments in electronic communications have created many new uses for the letter “e”—“e-commerce,” “e-learning,” “e-governance,” and so forth. These terms point to some of the ways in which modern information and communications technologies (ICTs) are changing how millions of people work and live. Against that background, it makes sense for the International Center for Tropical Agriculture (CIAT, the Spanish acronym) to ask how ICTs—especially the Internet—might serve in our efforts to help the rural poor build sustainable livelihoods.

In dealing with that question, this chapter first considers the larger context of the “information society” and the “digital divide.” Next, it describes the community telecenter as one means of enabling rural people to participate in the information society, focusing on the experience of a rural telecenter in Colombia’s southwestern Cauca Department. Finally, the chapter offers some thoughts about how CIAT could scale up the use of ICTs for rural innovation.

The Information Society

That we now live and work in an information society has long since become a truism. The effects of the information revolution are, however, unequally distributed. While some people, those who can afford and wish to apply ICTs, are seeing radical changes in their lives and work, others, especially in developing countries, remain in a comparative information vacuum. The term “digital divide” is commonly used to describe this gap between information “haves” and “have-nots” (Morrow, 2002).

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In recent years, many organizations concerned about poor people being excluded from the information society have begun trying to make ICTs more widely available and beneficial to marginalized groups in society (Chapman and Slaymaker, 2002). Initially, these technologies tended to be seen as something of a panacea. Some people assumed that just extending Internet access to the poor would necessarily result in large economic and social benefits. But, increasingly, the information society is being examined from a more critical perspective (Gómez et al., 2001; Gómez and Casadiego, 2002). Experts now remind us that, while the information society offers huge promise, it also has some obvious pitfalls, which we must try to avoid.

What the information society promises is easier access to education, health care, technology, and many other services and goods (Agenda de Conectividad, 2003). It might also lead to more transparent governments and more equitable societies (APC, 2003). In addition, it offers new opportunities for community-based networking, and for increasing knowledge flows from large institutions to small communities and back again.

All of that sounds quite appealing, so what are the pitfalls? In the first place, the Internet remains available only to a privileged few; access is especially limited in rural areas. And unless steps are taken to close the so-called “digital divide,” it is feared that the information society will merely create a new form of inequity that further distances the poor from the privileged. Another worry is that the Internet will become so dominated by corporate interests that it fails to serve development ends (CRIS, 2002). Then, there is the issue of intellectual property. Crop scientists at CIAT and elsewhere have already seen how this can complicate their work on plant genetic resources. It can frustrate knowledge flows as well.

In this setting, several global ICT initiatives of importance have emerged. Their overall purpose is to create a better policy and institutional environment for the many local, national, and regional ICT projects now under way (ITU, 2003). And they work toward this end in the usual ways—by forging global strategies, convening stakeholders, building partnerships, and so forth. Many such activities took place in preparation for the first part of the World Summit on the Information Society, held in December 2003 at Geneva, Switzerland.

CIAT should pay close attention to those deliberations—just as we did to the World Summit on Sustainable Development. As we follow the dialog on ICTs for development, I suggest that we pose two questions. First, what are some opportunities for bridging the digital divide by putting ICTs to work for rural people? And second, what specifically can CIAT do to seize those opportunities?

Putting Information and Communications Technologies to Work for Rural Communities

To some extent, these questions are addressed in CIAT's new strategic and medium-term plans. But even before or as those plans took shape, we were already moving forward with two ICT initiatives that extend benefits from the information society to rural communities. The first involved the development of a product-based CIAT Web site, and the second was a pilot project focusing on community telecenters.

The heart of the center's Web site consists of a series of options that offer access to the whole range of CIAT products—everything from plant genetic resources to tools and methods for research and development (R&D). The site also features a cluster of subsites corresponding to center projects. So far, 12 of these have been developed, and several more are in process, so shortly we should have subsites for all CIAT projects as well as for key regions in which the center works (specifically Africa, Asia, and Central America). These subsites provide further access to our products, and news and other information about ongoing research.

The number of visits to the site has grown exponentially since it was launched early in 2002. By May 2003, the site was getting about 125,000 visits per month, of which about one quarter were to the site's product catalog. Also, thousands of visitors each month are downloading PowerPoint presentations and Portable Document Format (PDF) files (accessed directly from search engines as well as from somewhere within the CIAT Web site) containing center publications and documents. Especially popular are the materials on agro-enterprise development. For example, in May 2003, PDF files for agro-enterprise documents were opened more than 140,000 times, although we cannot tell how many people actually downloaded the documents.

Our second effort to show how the information society can be extended to rural areas was the InforCauca Project, which supported three telecenters in southwestern Colombia. Among other functions, the telecenters offer public access to ICTs in poor communities. A central aim of InforCauca was to determine how ICTs could better enable organizations and individuals to work toward sustainable development.

With funding from the International Development Research Centre (IDRC) and the Rockefeller Foundation, the project was conducted jointly by CIAT and the Self-governing University Corporation of the West (CUAO, the Spanish acronym), together with various community organizations. InforCauca generated important impacts for the organizations and communities involved, and it was a rich learning experience that pointed the way toward further work with ICTs in Colombia and other countries.

But do those initiatives provide an answer to the question posed in the title of this chapter? Certainly, electronic publishing—especially CIAT’s new Web site—appears to help disseminate the center’s research products. Also, the telecenter project suggests how Internet access can be extended to rural areas and applied for rural development. So, perhaps it is just a matter of time before large numbers of rural people can easily access research-related information from CIAT and others via the Web.

Possibly so, but obviously disseminating products is one thing, while getting them adopted and used is another. As Menter et al. (this volume) point out, the real challenge is in scaling up rural innovations that involve complex and knowledge-intensive research products. Among other requirements, they tell us, this needs participatory approaches for working with end-users, as well as training and support networks that help rural communities adapt complex innovations to different conditions.

A Rural Community Telecenter in Colombia

Thus, in asking whether there is an “e” in scaling up, what we want to know is whether the combination of electronic publishing and telecenter development can help us meet that challenge in all its complexity. Or, to put it another way, can these interventions facilitate “learning alliances” and other strategies for scaling up rural innovations? To find answers, let us now consider the experience of one rural telecenter, located in the town of Tunía in central Cauca Department.

A distinguishing feature of this and other telecenters supported by InforCauca is that local development organizations host and support them. As suggested later, this is not the only telecenter model. But we think it is the best one for linking the use of ICTs to development, and for ensuring that the telecenters achieve both financial and social sustainability.

The telecenter at Tunía operates within a local nongovernmental organization (NGO), the Corporation for the Development of Tunía (CORPOTUNÍA, the Spanish acronym), which has 15 years of experience in conducting integrated development projects. Since the late 1990s, the organization has gained much experience in organizing farmers to create small rural agro-enterprises, using the territorial approach for agro-enterprise development devised by CIAT and various national partners in recent years. CORPOTUNÍA’s leaders have a clear vision of how ICTs can facilitate that and other development initiatives, and they are competently managing the telecenter.

The telecenter at Tunía did not find such a good host overnight. It took about 18 months of experimenting with different kinds of arrangements, involving at one point an association of six organizations. The telecenter was also placed at other locations—a rural school and the local cultural center—before finally being moved to CORPOTUNÍA.

Despite its instability during that period, the telecenter at Tunía made important gains. The telecenter operators, who had never worked with computers before, became proficient with basic computer software through training and experience. They found out about information sources and applications available on the Web that might interest their community. And they learned the basics of Web publishing through a course and follow-up support from a consultant.

Also, they began building a client base for the telecenter through personal contacts, promotion in local schools and events, and by organizing computer courses. As a result, the telecenter now has a steady stream of users, who reach it on foot, by bicycle, or by bus. For a modest fee of 1,500 pesos (about US 50 cents) per hour, they can do Web searches, send e-mails, and prepare documents, in addition to receiving basic orientation to these services.

A few characteristics of telecenter users are worth noting, determined through a baseline survey (Mosquera and Johnson, 2003). As one might expect, they tend to be young. The users surveyed ranged in age from 9 to 60, but had an average age of 26. This underscores the potential of telecenters for providing opportunities to rural youth. As one would expect also with “early adopters” of any innovation, telecenter users tend to be better educated than the general population. Almost half of users have at least finished secondary school. Most of them were visiting the telecenter in connection with their studies or work, or to maintain contact with family or friends living abroad. One user, for example, found out she could get a free e-mail address for her flower producers’ association. Then, she realized it could be included in the agro-enterprise contact list on CIAT’s Web site.

So, the Internet is starting to find a place in these users’ lives and work. And it complements the other means by which they obtain or share information, such as radio and television.

Content and Culture

Evidently, however, the mass media in Cauca are not satisfying people’s need for information in areas such as education and training, marketing of agricultural produce, production technology, and health. They mostly obtain this type of information from printed publications, such as leaflets and pamphlets, which are not very timely or widely available. Clearly, there is an important opportunity to provide people with development-related information via the Internet.

Nonetheless, just making information available on the Web and making ICTs more widely accessible in rural communities cannot guarantee that people will use these resources to make local agriculture more competitive, to protect fragile agro-ecosystems, and to work toward

other important social aims. Rather, local organizations must deliberately and systematically incorporate the use of ICTs into community-based development initiatives.

For this purpose they need to achieve two key ends. First, they must promote the creation of locally relevant content in forms that rural people can easily use. Second, they must foster a new local culture that encourages seeking, using, and sharing information. What can CORPOTUNÍA and its telecenter do to help serve those purposes, beyond offering basic Internet and computer services? Apparently, quite a lot, and the answer lies in local projects, linked to the telecenter. Over the last year or so, CORPOTUNÍA has played a key role in developing or carrying out several projects that create local content or foster a new information culture.

With Colombia's Ministry of Communications, CORPOTUNÍA carried out one of these projects independently of InforCauca. Over the last few years, the Ministry has implemented a massive social telecommunications program called Compartel (www.compartel.gov.co). The program has set up 670 Internet access centers in small rural communities throughout the country; about 20 of these are located in Cauca. Each center has two computers with Internet access and is run as a small business, often within other businesses, such as pharmacies and hardware stores.

One shortcoming of the Compartel model is that it lacks an inherent mechanism for linking the use of ICTs to local development. In an initial effort to remedy this problem, Compartel carried out a 1-year program to provide training for selected organizations in every community where Compartel centers exist. In addition, proposals were invited from these organizations for local projects aimed at applying ICTs to development.

During the program's planning stage, its leaders visited the telecenter at Tunía and liked how it was being run. Taking advantage of this opportunity, CORPOTUNÍA offered to implement the Compartel training initiative in all of Cauca and Valle Departments. It could take on this task because it was the only organization available with practice in running a community telecenter. The training initiative gave CORPOTUNÍA extra resources and experience.

More importantly, however, it pointed the way to a more ambitious role for CORPOTUNÍA and its telecenter. To further explore that role, CORPOTUNÍA submitted a proposal for a research project to Colombia's Institute for the Development of Science and Technology (COLCIENCIAS, the Spanish acronym). Under way since March 2003, the 1-year project is comparing five different kinds of community organizations in central Cauca for their potential to identify and promote development applications of ICTs.

Meanwhile, CORPOTUNÍA has undertaken another ICT project financed by a Spanish foundation. Its purpose is to create a virtual network for students from secondary schools in Bolivia, Colombia, Morocco, and Spain. The project is part of a strategy to combat prejudice in Spain against immigrants from developing countries. CORPOTUNÍA is coordinating the project throughout Cauca and Valle Departments.

Community telecenters in the hands of local organizations evidently have much potential as focal points for ICT project development, and this can contribute importantly to the telecenters' financial and social sustainability.

Adding Value to Participatory Research

One project in which CIAT works closely with CORPOTUNÍA suggests even more concretely how local organizations operating community telecenters can help organize rural people to build local content and a new information culture. The purpose of the project is to devise an approach for creating local information systems that offer vital business support for rural agro-enterprises. The work is organized around seven priority market chains identified by a community-based, agro-enterprise development committee, which CIAT supports, and in which CORPOTUNÍA participates.

The information system has two main components. The first is a Web site that combines important knowledge from farmers' experience with relevant information available from a wide variety of organizations. The other consists of a network of local communications groups made up of representatives from various farmer associations. The groups' main tasks are to:

- Identify and prioritize the information demands of their communities in collaboration with community telecenters;
- Seek and organize information (from local and other sources) that meets those demands;
- Feed useful information from local experience and experimentation into the Web site;
- Characterize local channels of communications;
- Develop and implement communications strategies for sharing useful information widely through community radio, meetings, bulletin boards, and other means; and
- Channel feedback from farmers' experience to R&D organizations.

These groups are to some extent akin to Local Agricultural Research Committees (CIALs, the Spanish acronym) and to other types of stakeholder groups formed through participatory approaches. Much experience in Africa, Asia, and Latin America has shown that such groups can be relatively effective in adaptive research, agro-enterprise development, and rural planning (Fujisaka, 1999). If farmers can carry out

such complex tasks with only modest support from formal R&D organizations, then surely they also can become effective communicators, with appropriate training that builds on strong local traditions of information exchange.

Local communication groups, linked to community telecenters, thus can help construct and share the knowledge farmers need to make their journey to sustainable livelihoods. And by doing so, they can add tremendous value to the participatory approaches that CIAT and other organizations have designed to help farmers reach that destination.

Moreover, local Web-based information systems, developed with the aid of local organizations, should provide farmer groups with electronic platforms for sharing their experience and insights with rural people at other locations. Such information sharing among farmer groups could contribute to scaling out participatory approaches through CIAT's learning alliances with international NGOs, such as CARE International and Catholic Relief Services (CRS).

Scaling Out the Use of Information and Communications Technologies for Rural Innovation

In the light of that experience, how should CIAT respond to new opportunities for putting ICTs to work on behalf of rural people?

First, I want to emphasize what we should not do. Obviously, it is not CIAT's job to extend ICTs on a massive scale to rural areas. We can leave that to government programs such as Compartel, to civil society organizations, and to private initiative, as reflected in the expansion of Internet cafes in small towns.

Occasionally, however, we probably will need to contract telecommunications experts to achieve connectivity for ICT projects in specific places. This will be necessary especially if we work in countries such as Honduras, Nicaragua, and Bolivia, where the infrastructure of telecommunications is less advanced than in Colombia. The main aim of this work will be, not so much to extend access to ICTs, but more to demonstrate how they can contribute to rural innovation.

A key requirement for demonstrating the potential of ICTs is having more content available in electronic form that is truly relevant to rural development professionals. CIAT can help do this, but we need to show more institutional commitment. Our product-based Web site is at least a step in the right direction.

We also need to explore the possibilities for sharing our tools, methods, and information more effectively through e-learning, or Web-based distance education, and through the development of dynamic

multimedia products on CD-ROM. This requires new partnerships with universities and other organizations possessing expertise in those areas.

But even those steps will not be enough. Our experience with CORPOTUNÍA suggests that a lot of what people want to know is available locally in the filing cabinets of organizations, or in the heads of technicians and innovative farmers. With CORPOTUNÍA, and with communications groups in rural communities, we are learning how to put this information and knowledge to work. One of the main lessons we have learned so far is that community telecenters can serve as focal point for developing projects to achieve this end.

In addition to making the telecenter financially and socially sustainable, these projects are creating locally relevant Web content, and fostering a local information culture. I believe they also can lay the foundations for on-line networks of innovative rural people, who want to share their knowledge and experience with one other, and express their needs and demands to R&D institutions.

So, how can we take advantage of what we are learning with CORPOTUNÍA about the role of telecenters in developing projects that lead to information and knowledge sharing? I argue that we need to scale up this experience, following much the same steps that Menter et al. (this volume) outline in their chapter.

The first step is to begin incorporating what we are learning from the telecenters into CIAT projects. Actually, this is happening already. CIAT's Agro-enterprise Project, in particular, is closely involved in communications and information initiatives that have grown out of the InforCauca Project. Through InforCauca we have learned how to build the capacity of local organizations to use ICTs for development, and with them we are learning how they can extend that capacity to farmer groups. There is much scope for expanding this work to other countries.

As I pointed out earlier, the InforCauca Project has been a rich learning experience. And it gives high priority to monitoring and evaluation of impact, and to documenting the project's experience. This should give us a solid basis for continuing the learning process through other projects in other countries.

Obviously, partnerships with local NGOs have been critical to our work with InforCauca. But we have found also that local universities can play a vital role in providing NGOs such as CORPOTUNÍA with technical backstopping, training, and other support. In addition, we believe that if CIAT wants to develop further ICT projects we will need to develop strategic alliances with various international organizations with strong capabilities in this area.

Of course, we will need new donor funds as well. But it just so happens that the main donors funding ICT projects these days are the same ones funding CIAT's research on tropical agriculture—aid agencies, foundations, and so forth. Many of these organizations have established special programs on ICTs for development, and CIAT is trying to tap those sources of funds.

This means we have an excellent opportunity to develop projects that incorporate the use of ICTs into ongoing work on agro-enterprise development, integrated pest management, participatory research, rural planning, and the like. By doing so, we can give our traditional donors one more reason to support CIAT, and one more way to help rural people build sustainable livelihoods.

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