

CREATING A PARTICIPATORY TELECENTER ENTERPRISE¹

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Representatives of more than 55 nations paraded to the podium at the United Nations and their theme was singing “mainstreaming ICT for development.” This was a two-day special meeting of the 56th Session of the General Assembly devoted to information and communication technologies for development. Nations from Algeria to Zambia decried the existence of a digital divide among nations, and many participants warmly welcomed the coming of the World Summit on the Information Science – scheduled for Geneva next year (2003) and Tunisia in 2005. The tone of the comments was reflected in the words of the representative from Nigeria:

Information and communication technologies are at the center of global socio-economic change. But the African continent remains unable to benefit meaningfully from the third great revolution, the information technology revolution.

As part of this movement, UN Secretary General Kofi Annan earlier launched the UN Information and Communication Technologies Task Force whose principal agenda is to harness the power of ICTs to meet the development goals of the Millennium Summit.

Much of the attention given by multi and bi-national donor agencies has focussed on the *connectivity* and technical infrastructure aspects of ICTs. For example, a two-year Global Digital Opportunity Initiative launched in early 2002 by the United Nations Development Program and the Markle Foundation “aims to bolster health care, education and business development with the latest computer and communications equipment.” (Jim Crane, Associated Press, February 5, 2002) The emphasis on the hardware side is illustrated by the identity of the key partners: Sun Microsystems, Hewlett-Packard, Cisco Systems and Time Warner who have agreed to donate personnel and equipment.

We move from this international stage to some practical issues those in the field face in translating the grand schemes into reality. For example, we have pointed out elsewhere that access to ICTs is more than wires, equipment and connectivity.² Two inter-related issues that we explore in greater detail in this paper are participation and intercultural communication. The frequent use of the term “digital divide” highlights an intercultural condition that can be seen concretely in the attempt by community leaders and elites to extend the digital world to poorer people through the establishment of telecenters. Furthermore, we see consistently the challenge of involving women, and often poor women, in the use of ICTs and helping them participate in telecenters.³ In this paper we report on a project in India just getting underway that is designed to test the viability of *intermediaries* to assist

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²R.D. Colle, R. Roman, and F. Yang: “Access is More than Hardware: Building a Constituency for Telecenters”, paper prepared for INET2000, The 10th Annual Internet Society Conference, Yokohama, July, 2000.

³This matter is explored in great detail in the recent report by Nancy J. Hafkin and Nancy Taggart for the US Agency for International Development and abridged by them in “Ensuring Women’s Ability to Take Advantage of Information Technology Opportunities,” in *The Journal of Development Communication*, 13/2 (December 2001), pp. 138-152.

women' self help groups (SHG) in the use of ICTs for creating and managing micro-enterprises.⁴ We also provide a glimpse of initiatives in Indian villages that are helping us overcome potential obstacles (intercultural and other kinds) to access by involving villagers in the planning and implementation of a telecenters initiative.

Intercultural and participatory aspects of telecenters

Basically, telecenters are shared public facilities that provide telecommunication services to persons who, for various reasons, do not have them available individually. Telecenters have significantly different features, and researchers have proposed telecenter typologies and classifications based on multiple variables. But beyond the fuzziness of the concept, be they in a village in Sub-Saharan Africa or South India, or in a remote town in Mexico, Canada or Australia – telecenters have one unmistakable characteristic in common: they offer *shared* access to information and communication technologies (ICT).⁵

The challenge is to make telecenters understood, valued and used by the community. In this context, the term 'digital divide' might appear as a hazy notion that confuses the real underlying problems, above all when dealing with developing countries. The main issue is not the so-called *digital* divide, but social, economic, and educational divides (and these divides are not new!). Telecenters are among the most visible tools in that widespread effort to try to bridge the other divides. And it is important to realize that these gaps — whether educational, economic or social — are precisely at the core of the obstacles to participation in telecenter activities. Telecenters could be bricks in an intercultural *digital bridge* if they adopt a participatory approach that systematically encourages community involvement in the design of solutions to development problems through the use of information technology.⁶

How might telecenter proponents in a community strategically address the participation issue? A starting point is for the telecenter leadership group to address some basic questions about participation in the telecenter program.

1. *Why* is participation important to this project? Among the answers might be: because it conveys a sense of community ownership; it provides indigenous wisdom; it helps reflect community values and will help us identify information needs; it provides important resources, such as volunteers or technical expertise, at a favorable cost; and some people need the telecenter's services.

2. *Who* should participate? The answers may flow out of the first question, but they should be made

⁴On intermediaries as facilitators in ICT implementation, see R. Heeks, "i-Development not E Development," in *Journal of International Development*, 14, (January 2002), pp. 1-11.

⁵Francisco J. Proenza discusses the characteristics of cybercafés and telecenters in "Telecenter Sustainability: Myths and Opportunities," in *The Journal of Development Communication*, 12/2 (December 2001), pp. 94-109. Elsewhere, we layout three broad categories of shared access facilities: telecenters and information access points (which are largely for development objectives) and cybercafés (largely for entrepreneurs' profit). See: R. D. Colle and R. Roman: "The Telecenter Movement: Using ICTs for Social Change", paper presented at the Nineteenth Annual Intercultural Communication Conference, University of Miami, February 21-23, 2002.

⁶We discuss this in more detail in R. Roman and R. D. Colle, "Digital Divide or Digital Bridge, Exploring Threats and Opportunities to Participation in Telecenter Initiatives," in *TechKnowLogia*, Vol. 3, No. 3 (May-June 2001) on-line <http://www.techknowlogia.org/>

explicit; it is not enough to say “the community.” What groups of people should receive specific attention because of the possibility they will be marginalized — like women, poor people, minorities, the elderly.

3. *How* might people participate? The easy answer is to say that all can participate through their use of the ICT facilities. But there are other potential facets of community participation in a telecenter: volunteers who oversee daily operations, tutors who give lessons, advisory groups for different aspects of the operations, people who provide links to other community organizations, and people who manage particular data bases and add value to information resources.

4. *How much* participation should be sought? Is maximum participation the goal, or should there be a target called *optimal* participation? Some would advocate a kind of participation where the community is fully responsible for the telecenter, from policies and management to raising money and caretaking. Local culture and people resources may dictate a more limited role for the general community. It is not hard to imagine situations where there can be too much participation. Agreement needs to be reached on the “how much” issue.

5. *When* should participation take place? This depends on what kind of participation (the *how*) is being considered. By putting participation into the *planning* stage and being specific about the timing avoids the “we know it’s important but haven’t got to that yet” defense.

6. *What incentives* can be offered to those who volunteer to participate? Benefits from the information services may satisfy many. Money and public recognition are important, but so too are special privileges regarding use of telecenter facilities or, for telecenter volunteers, discounts from shops in the community (which is a way that merchants can participate).

Obstacles to participation in telecenter initiatives

Telecenters are an innovation and thus a stranger to the community. And a new telecenter in the community will mean a change in the way some parts of the community work. Some members of the community will welcome the telecenter with curiosity and fascination. Others will see it as a threat and an intrusion in a system that already has its time-tested traditional ways. In this section, we look at some of the obstacles that need to be addressed in getting widespread participation.

1. Economic obstacles. Can the community pay for the services? Acknowledging that you must have a business plan for the telecenter’s sustainability, you will need to consider what services people can afford, and who might be excluded if there are charges for various services. Research and planning will reveal what services are feasible and affordable. We can also ask another question: even if community members are able to afford the services, is the community willing to pay? The approach we take may determine whether those who use the telecenter are participants or just clientele.

Box 1 In India, free and paid services

In an experimental telecenter project in South India, organized and planned by the Swaminathan Foundation and funded by the IDRC, the community is not ready to pay for information services. Telecenters provide a kind of information they think should be public and free. This perception is connected with the fact that many villagers are used to receiving government subsidies and they see the telecenter as a service that should be also supported by state funds. The provision of free services removes the economic obstacle to participation, but what about the sustainability of the project? The villagers are being very creative in yielding solutions. They are trying to sustain the project financially through community banking practices and the support of self-help groups. The telecenter, as an information and training center which is at the root of self-help group activities and is the promoter of community banking opportunities, is seen by different community groups as essential for their activities. They keep most services free. A share of the money kept in the bank (probably in form of interests) would serve to pay a salary to telecenter volunteers and to maintain the equipment.

2. Physical obstacles to participation. Do community members have problems in accessing the center? We have to ask ourselves: where is the telecenter located? It is clear that if the telecenter is away from the usual community meeting points, it might hinder participation. In South Africa, the telecenter in the township of Mamelodi, in Pretoria, was originally located in the local library. Shortly after, they decided to move to an independent location. Esme Modisane, the telecenter manager, explains the reason why: "the library location was not appropriate because it appeared to the community as an official or government site. People were intimidated by the library and what it means; they think it is for 'intellectual people'. They do not feel it as *their own* community center if it is located within the library". In Hungary, the very rural nature of the movement usually means that there are few locations in a community where a telecottage can be placed, so it's the community that decides where it should be placed, in fact, *participating* in an important decision related to the telecenter's operation.

3. Social obstacles to participation. Are there any social (including gender and age) or ethnic reasons that impede the participation of some community members in telecenter activities? It may be difficult to engage some members of the community in a participatory process because they are marginalized, geographically distant, or very busy. Telecenters should be flexible, adaptive, and most importantly creative in encouraging these community members to participate. In Canada there was a generational gap. In one community, locations had to be set up separately for young people and adults because each intimidated the other, thereby impeding both groups' participation. Where women are discouraged from moving beyond the home, special attention must be given to how they can become actively involved with the telecenter. For example, as part of a strategy to attract women to participate in telecenter activities in Pondicherry, India, the Swaminathan Foundation requires that at least one woman is engaged in the management of each center (for instance, the telecenter in the village of Embalam is ruled by four female volunteers).

Box 2 Cultural factors in access

There is a story we were told in South Africa by Paula Middleton, a British Council official who was actively working on telecenters in that country. It is a story about computers. She explains: "The British Council demonstrated a telecenter at the Commonwealth Summit exhibition in Durban last year. It was very interesting to see the reaction from the public to visiting the telecenter stand. Indian visitors to the stand were confident with using the computers, whereas Black visitors needed encouragement to try out the computers and to navigate the Internet, not sure how the technology could be applied to their own experience. This experience seemed clearly to point to the heritage of previous disadvantage in this country and the challenges faced for the use of technology to enable equitable development. On the other hand, Black children felt very comfortable in front of a computer. And this fact clearly shows that entering the digital age is an educative process".

4. Political obstacles to participation. Some groups within the community may be unfriendly or even hostile to each other which can make effective collaboration among them difficult. The telecenter manager may not be able to eliminate these tensions; however, the manager may still be able to gather input from these conflicting groups by meeting with each of them separately. Are there political reasons that restrain the participation of some people? If a telecenter is politicized, it can create power struggles. An example is the first telecenter established by South Africa's Universal Service Agency, the Gasaleka telecenter, in the Northern Province. This telecenter, which is run by the local South Africa National Civic Organization, has very good links to community groups. All the organizations in the area support and work with the telecenter. According to the telecenter manager, Masilo Mokobane, "the telecenter is well-known, although we need to engage the tribal authorities more. However, we don't have problems with any organization. We do have problems with some individuals within those organizations, though, because they feel jealous of the resources we have here. But when those reticent individuals are informed, and know the telecenter is here to support the community, they help us. *The telecenter cannot be politically driven, because it is for the community.*"

Associating a telecenter with a partisan organization such as a political party or religious group runs the risk of excluding non-members of those groups. There are also more subtle aspects of political power. For example, those people in power may discourage or obstruct the community's use of information technology because of potential challenge to their authority. In Mexico, we asked a school girl in a telecenter if her teacher encouraged her to use a computer for her school work. "No," said the girl, "the teacher is afraid of the computer because we might learn something she doesn't know."

5. Public awareness. Does the community know about the telecenter? The obstacle to participation here has two parts: awareness that the telecenter exists and awareness of what benefits there are from the telecenter. The second of these is the more challenging. It is illustrated by the woman in Nepal who raised the question: "Our priorities are hygiene, sanitation, safe drinking water," said Supatra Koirala, who works at a private nursing home, "how is having access to the Internet going to change that?" In a Canadian community, just changing the name from a somewhat forbidding "Community Access Program Site" to "cybercafe" increased the visibility and use of the facility.

The question of benefits is closely related to how people in the community think about the telecenter's relevance to them. In India, the Swaminathan Foundation is making a big effort in this direction: trying to make the telecenter relevant to the surrounding communities. As part of their telecenter project, they have established a *value addition telecenter*. This center collects and repackages information (thus making the information *locally relevant*) on a daily basis, and makes it available to a network of telecenters through a wireless communication system.

Gender as a participation and intercultural issue

The cultural barriers that hinder women's access to ICTs, and especially computers and the Internet, are more problematic and complex than simply making computers available in a library, telecenter or other public facility. Those barriers include literacy, education, language, cost, locality, the perceived role of women, and technophobia. These are not inherent in the female condition as we can see in thousands of offices across the world where men are often less competent in dealing with the computer programs and putting the toner in the office copy machine. Nor are they barriers uniquely experienced by females. But they are barriers that exist widely and more severely for women and particularly in Africa and some parts of Asia. Some of these obstacles are as resilient to change as female genital mutilation. They are deeply embedded in cultural practices such as denying school opportunities for girls, which is where the computers are most likely to be and where the girls might learn to read.

In India we looked at some shortcuts to accelerate women gaining some of the benefits that come from ICTs. We have already done this regarding the impossibility today of each person or household having an individual computer and individual connection to the Internet by setting up telecenters. We can try to accelerate women gaining benefits from ICTs by exploiting the concept of *intermediaries*.

Richard Heeks of the Institute for Development Policy and Management in the UK's University of Manchester suggests that intermediaries are organizations or individuals "who own ICTs and who can act as gatekeepers between cyberspace and the organic, informal information systems of those on the wrong side of the digital divide."⁷ Heeks suggests that good intermediaries bring more to the process than connection to information and communication data and hardware. Motivation is a key element. Heeks asserts that too often projects assume motivation is present and too often it is not. In designing ICT systems within development projects he suggests that it is critical that someone have an answer to the 'Why should I?' Why should I learn ICT skills? Why should I access ICTs? Why should I use ICT-borne information?

This is how we are using intermediaries to deal with both a participation and intercultural challenge. In India there are thousands of women's self help groups (SHGs) involved in a wide array of micro-economic enterprises. Many have been mobilized by NGOs that have a commitment or mandate to improve the welfare of their constituents. For example, in Gujarat, the Self Employed Women's Association (SEWA) has a membership of more than 200,000 women in some 790 villages. SEWA helps these members organize into groups or cooperatives so that they can cooperate to build stronger enterprises.

The promotion of women's SHGs is seen as an effective means to empower poor women and enable them to participate in and drive their own development. SHGs are now recognized as a key transmission belt for development efforts by the state and the civil society. Such village level collectives are a preferred institutional mechanism because they are gender sensitive, participatory, cost-effective and grassroots organizations.

Many of the women in these groups are not benefiting from ICTs because of the cultural barriers noted above. As an innovative initiative aimed at broadening their access to ICTs, we plan to have representatives of (and in) SHGs trained in ICT use -- for example, trained in "information seeking" on the web, using e-mail, and working with self-learning and distance learning multi-media packages. As we look toward operationalizing this approach, existing community-run telecenters would be the focal point of a SHG's activities. A scenario might unfold like this. A group of SHG representatives is trained to use ICTs, with the training material built around micro-enterprise

⁷ R. Heeks (ibid.)

management. The SHG representative would then perform four roles: (1) serve as an information source on micro-enterprises for the SHG; (2) be the group's and individuals' liaison with the telecenter for obtaining information on other issues and for communicating for those individuals; (3) facilitate distance and self-learning programs for the SHG or its individual members; and (4) carry out informal ICT peer training within its groups so that SHG members might be motivated and empowered themselves to use the telecenter's ICT services directly.

This scenario sees the representatives as linking SHGs and the information resources available through ICTs (which may include, besides computer-based technologies, a range of other media such as audio and video recordings) and open paths to such newly emerging ventures as e-commerce and e-governance.

A strategic approach to participation for the design and establishment of telecenters: an example from India.

The Communication Department at Cornell University, in partnership with the Tamil Nadu Veterinary and Animal Sciences University (TANUVAS), is setting up a research and development telecenter project, with financial support of the International Development Research Centre of Canada. The project, modest in scale, aims to test the role of universities as a support unit for rural telecenters. In the first phase, TANUVAS is converting three of its research and training offices to telecenter support units in the districts of Tyruchy, Vellore and Madurai, and installing sub-centers in three villages located in those districts.

In the context of this discussion, it is important to clarify that

a telecenter is the product of an eclectic strategy for social change that mixes a prescriptive top-down technology transfer with a bottom-up community leadership to make the technology work for self-determined development goals. In other words, the development tool is normatively prescribed while the process of technology use is expected to be appropriated and guided by the active participation of community members.⁸

Taking this eclectic concept into account, we used a *strategic* approach to participation as the initial step for the establishment and design of the telecenters. A strategic approach to participation starts with at least two questions: how do we do it, and for what purposes.

The strategic tool of participation was clear: an information and communication needs assessment exercise. During the summer of 2001, a TANUVAS-Cornell team, supported by staff from the Swaminathan Foundation, conducted an information and communication needs assessment study. This preliminary research was the focal point of the project planning and design process. With local young people as our research team, we collected qualitative and quantitative data through a survey questionnaire (N=750) and focus groups of local women, men, and youth in the three villages where TANUVAS will establish telecenters. The focus of this comprehensive research effort was to draw a map of the communication and information patterns used in the village communities, including existing information resources and communication networks. The primary emphasis was put on identifying current village assets and opportunities, and then analyzing the potential for a proactive telecenter to solve actual information deficits and meet new demands.

⁸ Raul Roman & Royal D. Colle: "Content Creation for ICT Development Projects: Integrating Normative Approaches and Community Demand". *Journal of Information Technology for Development* (forthcoming).

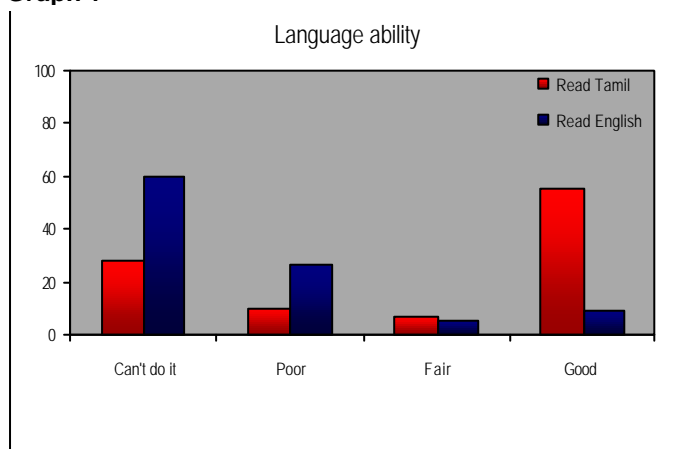
This research approach conceives participation basically as a *consultative* process in which villagers decide if they want a telecenter and, if so, determine the role of the telecenter in the village life.

These were the expected outcomes of that initial participatory process: (a) to assess the potential relevance of telecenter services (in order to guide the design of the telecenter project); (b) to raise awareness (and also help design strategies for awareness raising) about the telecenter and the services it can offer; (c) and to start the process of project appropriation by the villagers through the constitution of telecenter steering committees. Relevance, awareness raising and community leadership are the three essential prerequisites to initiate a participatory telecenter enterprise. The next three sections briefly explain the role of these elements in our telecenter project.

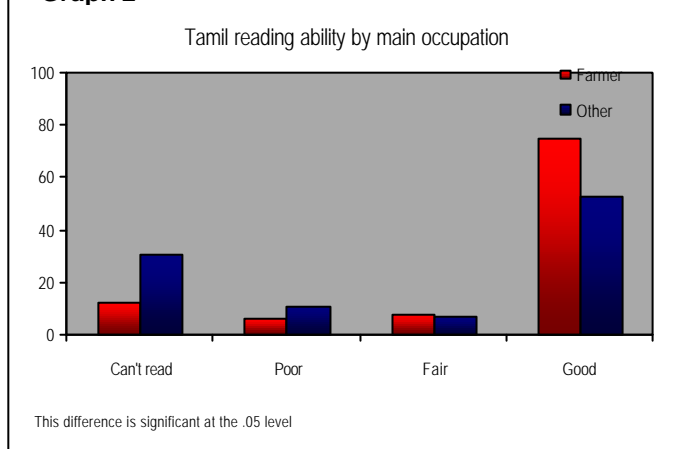
A consultative process to assess the potential relevance of telecenter services

While at this writing the data are still being analyzed, preliminary results of focus group and the survey show differences in information uses and patterns depending on education, gender, age and occupation (see Graphs 1 and 2). Agriculture is the main economic activity of the villages studied. In the focus group discussions, farmers – men and women – revealed that they require information on new seeds and products, fertilizers, market prices, and other agriculture-related issues. However, women especially demand information about their children's education and health, while youth participants said they were mainly interested in employment opportunities. In the survey, participants coincide in emphasizing government and employment as two of the most demanded topics of information.

Graph 1

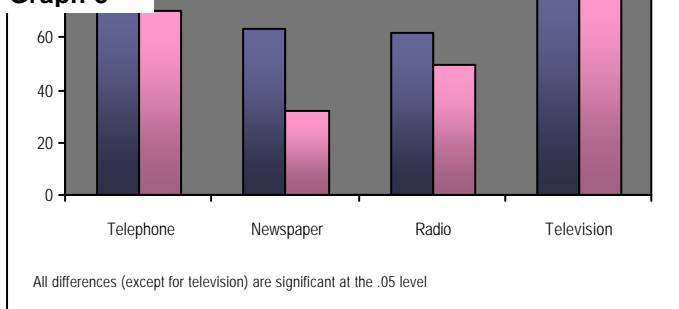


Graph 2

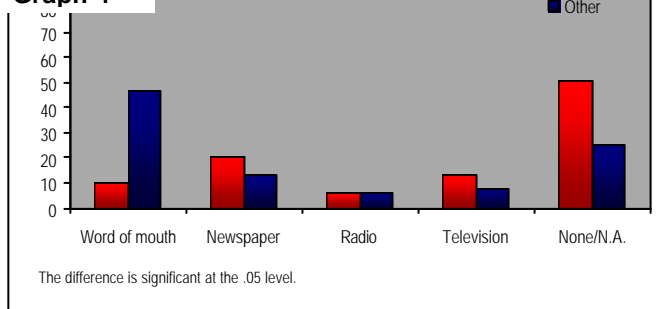


Our research also shows that information needs change depending on the time of the year. There are cyclical changes in information needs during the annual calendar because the village economic and social life revolves around agricultural seasons and local religious and cultural traditions. This situation has implications for the content provision activities facilitated by a telecenter. For example, men and women express an interest in employment opportunities during the months when there is not much activity in their farming.

Graph 3



Graph 4

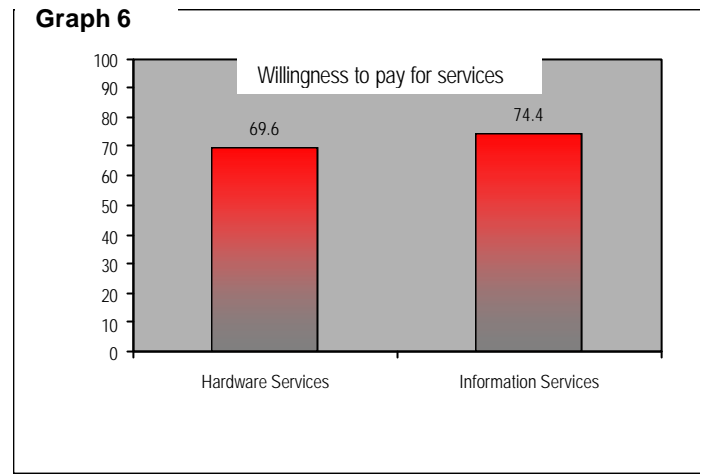
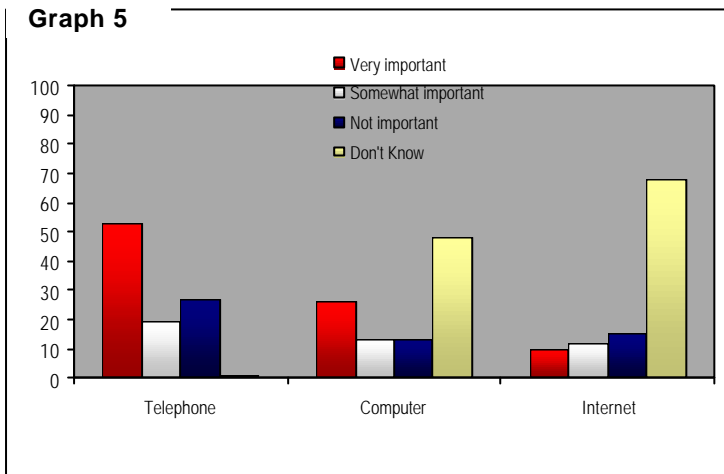


However, simply understanding the topics of interest and the right tempo of the content provision is not enough: it is essential to know the most appropriate channels and formats to disseminate that information. The surveys shows how socio-economic differences determine different media use by gender and occupation (see examples from Graphs 3 and 4). Our research suggests that the high rates of illiteracy and low levels of formal education in the villages studied make interpersonal communication and audiovisual materials most appropriate. And there is also the question of language: in the TANUVAS project, content should be provided in Tamil, the local language, but also taking into account that many villagers are not able to write or read. Only a low percentage of the population speaks English (and this percentage is almost exclusively limited to the youth). These observations will lead to our testing a strategy for using intermediaries for reaching some of those who may never touch a keyboard or enter a telecenter.

The issue of awareness raising

There is no possible participation of community members in telecenter activities unless they aware of what a telecenter is and understand its potential to improve their lives. Our research reveals that most villagers do not know what a computer or Internet can do for them. Most importantly, they don't know what a computer or Internet is (see Graph 5).

However, our data show that certain kinds of information is of great value to villagers, and they are willing spend the energy and money necessary to seek and obtain that information (Graph 6). It is clear that the issue is not technology: the issue is information and communication.



Fostering community leadership

One of the most important results of our needs assessment was the constitution of a local steering committee for each telecenter site. These committees, formed by a diverse group of villagers (including people of both sexes, youth and elders) are in charge of monitoring the economic and social sustainability of the telecenters—in close contact with personnel at TANUVAS. For example, these committees decide about new services by taking the pulse of village needs, and they administer existing resources and look for new ones (including looking for volunteers in the community interested in collaborating in telecenter activities). These committees act as local telecenter champions.

Conclusion

Integrating normative needs and community demand

Any 'ICT for development' strategy is driven by certain technological determinism: ICT-based community development initiatives are a case of technology transfer, and usually the emphasis is on the potential of the technology, mainly computer networks, to provide information and communication opportunities to the rural poor. However, at the same time, precisely because of past experiences with technology transfer and research on diffusion of innovations—and also because these efforts try to find a place in the context of a post-modernization trend that underscores 'people-centered' development—there is an effort to foster participatory approaches to project design and implementation. Therefore there is a mix of top-down and bottom-up approaches.

This is particularly apparent in the process of decision-making about the kinds to information services to be offered by a telecenter. In this case, we observe that while communities define their communication and information needs (through participatory needs assessment, monitoring and evaluation), the local telecenter staff, in collaboration with other project stakeholders (such as universities, as is the case of the TANUVAS project described before), have an active role in the identification, retrieval, processing, and diffusion of content. The information services provided by the telecenter will expectedly respond to the local community expressed needs (what is usually called 'demand'), but it is clear that some decisions on content will be based on what the 'experts' paternalistically think the community needs (what we call 'normative needs'). Therefore, there is a forceful integration of normative needs and community demand in the management of content for

telecenter development.

No field of dreams

A telecenter is a new resource in the community, and therefore it is (at least initially) a demand-creating project. In this respect, Hornik states that “demand problems call first for investment in motivation and in mechanisms (like group meetings and multiple channels) that ease and reinforce participation”⁹. From past experience in development communication projects, it is clear that people most in need of a specific information or communication service may not necessarily respond to simple service availability. Applying a field of dreams approach’ (“build it and they will come”, or “put a telecenter and they will use it”) is naïve. And it can also be dangerous: our focus group research reveals how village elders and leaders act as a main source of information and communication, and if a telecenter ignores this tradition, it may bring power clashes and conflicts that hamper any ICT-enabled development initiative. This indicates the importance of raising awareness about the role of the telecenter, while also exploring every opportunity to sensibly *integrate* the telecenter in the existing local communication structure.

However, creating relevant services and raising awareness about the existence and value of those services are necessary but probably not sufficient conditions for effective telecenter use and community participation in telecenter activities. Our study shows social and economic divides that may hinder equal access to the information services provided, no matter how useful or relevant the content is or how information-seeking oriented the potential users are. For example, in our work with women’s self-help groups, we will need to deal with issues of self-efficacy (the women’s self-assessment of their ability to take action) and the women’s perceptions of how significant people in their environments support or resist what they do.

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⁹ Robert Hornik: *Development Communication: Information, Agriculture and Nutrition in the Third World*. Longman, New York. 1988.