

Telecentres: Best Practice Examples

There are three basic models for establishing telecentres, ranging from (1) low-cost initiatives which can be replicated in rural areas throughout the world, through (2) an optimal model which corresponds to the most likely solution for towns and cities to adopt, to (3) an ideal scenario where the telecentre is developed as the hub of a new planned community, the “wired city”. Each of these options will be considered in turn.

OPTION 1 - LOW-COST INITIATIVES

1.1 Bangladesh

The Grameen Co. of Bangladesh has developed an initiative which could well be replicated in Latin America. Through its telecommunications subsidiary, and in tandem with its banking operation, it has developed a Village Pay Phone project which helps Bangladeshis without financial collateral to provide telecommunications services to their communities. They purchase mobile phones via lease, and pay for their investment by allowing villagers to make calls and send and receive messages. In time, other services such as email and fax will also be available.

The initiative has shown that poor rural residents value telecommunications and are in fact willing to pay fair (and sustainable) prices for telecoms services. In addition to providing access for the community, the phones create microenterprises. Furthermore, by employing mobile phones that can be used anywhere in the community, problems arising from the location of fixed community phones have been largely avoided.

1.2 Tanzania

Adesemi Communications International is providing the first reliable, quality phone service in Tanzania through the Adesemi Payphone concept. They have installed durable user-friendly units, capable of connecting local, long distance and international calls.

Their wireless system allows the flexibility to install payphones where they are most needed, regardless of whether landlines exist. Instead of using coins, users can purchase Adesecards in denominations as small as 45 cents. Minimising vandalism and maximising theft protection, these cards have proven far superior to coins.

Small businesses that are heavily dependent upon communications for their commercial viability, such as taxi dispatchers, have reaped tremendous benefits. The company is planning to add Internet connectivity to its phones and is expanding its operations elsewhere in Africa, and to Latin America and Southeast Asia.

OPTION 2 - THE OPTIMAL TELECENTRE

We have deliberately chosen to emphasise Latin American examples in this section, to make the point that the bridge between Europe and Latin America is far from being a one-way traffic. The case studies demonstrate local resourcefulness and business models which could well be emulated in European contexts, as well as showing the

problems which technological, economic and cultural issues reveal in peripheral regions worldwide.

2.1 Peru

Red Científica Peruana, located in Peru, is completely self-sustaining, receiving no subsidies, governmental or otherwise. RCP has successfully set up a national network of 27 telecentres in Peru, which typically consist of 20 desktop computers with dedicated Internet access. The telecentres provide computer rentals, training, personal email accounts, World Wide Web page development and other services.

What is most notable about RCP is its successful business model. They have devised a fee structure that covers costs and allows their organisations to grow while retaining profits. Additionally, RCP has become the largest provider of Internet access in Peru and the country's most popular portal with 20,000 hits per day (85% foreign).

RCP recently signed an agreement with the US investment fund Westsphere to form a new communications company, dedicated to expanding current Internet services, with plans to expand into long distance telephony and television programming.

2.2 Chile

Centro Comunitario Internet El Encuentro, Chile's first community Internet centre, is located in Penalolen, an economically disadvantaged area of Santiago. By providing the opportunity to learn about computers and the Internet and access to them, CCI El Encuentro hopes to promote personal, social and economic development in its community. In addition to listing contact information for local microentrepreneurs, it transmits the community radio station over the Internet, and hosts other local social development groups.

Not satisfied by fostering production and dissemination of local content by the information have-nots, CCI El Encuentro also hopes to become a link between the community and government, especially as it continues to initiate new forms of e-government.

2.3 Colombia

Since 1998, working-class districts in Bogota have been the subject of three community experiments with access to new information and communication technologies (ICT). These projects were set up to establish Neighbourhood Information Units (UIBs), which represent yet another form of what are known generically as telecentres. These are places where the public can gain access to information and communication technologies: they can function as experiments in rural and urban telephone service, community radio, documentation centres and public libraries, among others.

The UIBs were established in the headquarters of the three organisations chosen to run them, and were equipped with two computers with access to the Internet and email, as well as a printer and a scanner. The three organisations have libraries that are open to the public, and in two of them the UIBs were located in primary and secondary schools that are part of their educational projects.

As pilot experiments that can serve as a point of reference for other places, other groups and other times, it is important to think about the conditions needed for these telecentres to be self-sustaining and viable, both from a technological viewpoint (telephone lines, electricity supply, servers) and from the cultural perspective (social and historical characteristics, pressing needs, cultural outlook, space and timing, levels of education and literacy), economic (income levels and ability to pay on the part of individuals and community organisations), and political (participatory mechanisms, political networking and interaction, power relationships). Addressing these factors is essential to the survival of the telecentres, and to ensuring that they can have a positive impact.

A paper offering an interesting evaluation of the successes and problems experienced in this pilot project is reproduced as Appendix 1: *Experiments in community access to new communication and information technologies in Bogota* - Luis F Baron, August 1999.

2.4

England

Numerous examples of telecentres exist in the UK. One of the best known is the WREN "telecottage" set up on sustainable principles in a rural part of the Midlands. The following is an excerpt from an article by Robin Bardon, *Environmental Science*, Bradford University 1999.

Warwickshire Rural Enterprise Network (WREN) Telecottage

Background

Established in 1991, with the aid of private sector finance, and a TEC grant, WREN is Warwickshire's longest operational telecottage. It was planned, and has since been managed, by the National Rural Enterprise Centre.

WREN is at the centre of telecottage development. It has run the national subscription service of the Telecottage Association since April 1993, when the association was first set up.

WREN's definition of a "telecottage":

"A telecottage is a local resource centre, a focal point for the community, combining formal and open learning training with business services and a fully computerised public workplace. "

Whilst non-profit-taking, the telecottage has in the past two years made strides towards self-sufficiency. Even as early as year four (1995) it had reduced its dependence on grant income by 90%. And through selling commercial services, including word-processing, DTP, Web page design, translation and data management, WREN had raised its turnover by 80%. Some services, such as the Nursery, were breaking even by this point.

Description

The Telecottage is staffed by a team with broad skills in business management, administration and community development, with ICT experts on hand in the parent project, NREC. The team aim to pass on their knowledge and expertise to the

Telecottage's clients while also raising enough in funding and consultancy to pay the team's salaries.

Aims :

"WREN's mission is to stimulate and sustain the rural economy of Warwickshire by reinforcing links between enterprise, community groups and individuals through the provision of focal points for social and business interaction and work; and by improving access to IT, IT training, information, business advice and support services."
"The telecottage aims to provide under one roof a range of local support services to local businesses and communities based around computers and telecommunications. "

Activities:

The Telecottage provides a range of "integrated services" and facilities. These include:

- ICT support and ICT training
- a computerised workplace with childcare facilities
- business support services and facilities

- business incubation
- marketing and sub-contracting support
- social events to generate networking opportunities.

- WREN has been raising public awareness of ICT, teleworking and telecottages through involvement in a number of national initiatives, including:
- the DTI's 'IT for all' initiative
- the BBC's WebWise campaign to upskill the nation in the use and exploitation of ICT technologies, particularly those with no or limited access to it
- the Linking Communities programme for rural voluntary groups In the Midlands area, sponsored by the Community Development Foundation.

Activities on this front include:

- providing free or subsidised seminars and workshops to the local public and local community organisations
- delivering free or subsidised training and advice for new businesses
- networking with interested organisations and groups through organising social events
- online information, in its own name and with partners
- demonstrating ICT technology (WWW, e-mail, video-conferencing, etc.) by holding open days.

Apart from the networking opportunities they provide, the social events are seen as important to reduce the isolation that may possibly felt by local teleworkers.

WREN actively promotes, with the NREC, an online working system called RuralNet, which has National Lottery support to help rural voluntary sector subscribers.

How WREN works - business support :

The business support function of WREN is flexible in what it offers local businesses: *"A small business can buy as little or as much as it needs - from one photocopy to a full support service. "*

Some businesses choose to use WREN as a permanent base where their mail, telephone calls and faxes are received.

The Telecottage specialises in providing 'virtual office services'. *"These provide an official "front" for businesses including telephone answering, a mailing address and meeting space. These services aim to fulfil all the functions of a traditional receptionist / secretary, but without the expense of a full-time employee, the office space and other associated peripherals.*

A number of micro-businesses have effectively used the Telecottage as an accommodation address, where secretarial staff deal with enquiries. The overall effect is to give the business a more professional image.

How WREN works - training and ICT support :

ICT training includes hands-on courses in using e-mail, the World Wide Web, and software packages. A particular emphasis is given to harnessing the Internet to improve the competitiveness of local business, e.g. retailing via the Internet and improving business-to-business transactions. WREN's "Open Learning", described as 'train as you go', provides for a range of learning styles. Courses are formatted for full-day, half-day, evening or hour-by-hour delivery, and can include offsite courses. Many training courses are affiliated (RSA Small Business Certificate and CLAIT).

Conventional Benefits:

WREN's principal benefit is in providing an innovative, small scale model to stimulate rural economic development, putting it into practice in the rural area it seeks to serve.

Through providing a focal point for access to new technology (ICT) and new ideas, and. By encouraging more effective use of ICT and new ways of working, WREN is stimulating growth and development of small rural enterprises. After six years of operation WREN had directly established over 30 new businesses, incubated a further 12, and a further 600 other businesses, projects and telecottages had been supported and/or advised.

For those local businesses that use the telecottage to host their communications it enables flexible working, with all its attendant benefits for the business and employees involved. Personnel are able to telework from home or mix working from home with using the telecottage. This arrangement also permits greater use of mobile working, which often allows local businesses to concentrate further on developing business, delivering services, or completing other essential business transactions requiring employees to be on the move.

WREN's virtual office services and the Telecottage's facilities also provide the ICT infrastructure and support necessary to make managing a micro-business feasible. This allows potentially larger and more profitable businesses to incubate until they are fully established and able to grow.

Job opportunities are also created. Following training, some trainees return to work on the same equipment, in the same supportive environment, either on a self-employed or contract basis. By 1995 WREN had provided over 200 people with enterprise and/or ICT training. Of 40 women who received "back to business" training, 15 set up successful small businesses and 13 found paid employment

Since the Telecottage provides a point of contact between existing small businesses trainees are also able to mix with entrepreneurs in the Telecottage workplace and benefit from potential networking opportunities.

Sustainability Benefits :

Many outcomes stemming from WREN's activities and its general approach are aligned with principles of sustainability.

The greatest benefit is likely to focus on the support for a form of local economic development that is less resource intensive than conventional economic growth. Business clients effectively share ICT equipment and office facilities and space, allowing them to concentrate on their core activities and business development. This promotes local economic development with growth in demand for office space, land and other resources. The Telecottage is likely to consume such resources in an efficient manner - a manner in which greater value is yielded per unit of resource, with the benefits generated being passed wider afield than would be the case for conventional uses in serving disparate interests in disparate locations.

Furthermore, encouragement and active support of teleworking and the use of ICT technologies may see the benefits associated with teleworking accrue further, such as reduced pollution and congestion associated with commuting to work at peak traffic hours.

OPTION 3 - THE ULTIMATE SOLUTION: THE VIRTUAL VILLAGE

3.1 Finland

The Helsinki Virtual Village being developed in Arabianranta, a sector of the Finnish capital, represents the ideal concept of the telecentre at the hub of the community - indeed, the telecentre in this model is a virtual construct, no longer a physical place. Arabianranta is being developed as the world's first wireless information society, linking all the residents and workplaces, and all those involved in education, art and design into a virtual community.

Wireless services in the area will include:

personal navigation

public transport routes and timetables

remote home control (functions and appliances including video-recorders)

ordering of products and services, management of deliveries

contact with on-line doctors, health centres, and libraries

local logistics

control of access rights.

The project involves a number of well-known companies including IBM, Nokia and Digia. It is expected to be complete by 2010, when the community will have about 25,000 members within a one-kilometre radius linked by fibre network. The ultra-modern and inexpensive communications are a major attraction to companies locating in the district. The intention has always been to design a model which could be replicated anywhere in the world: the Helsinki Virtual Village makes all the services in the area accessible anytime, anywhere, simply by tapping into the village portal from their smartphones. To give just one example of how this will work in practice, a businessman needing a taxi will not need to tell it where to pick him up: the sim card inside his mobile phone is connected to the village network and a digital map will tell the taxi firm his exact location.

Finland shows the future of ICT in already having 65% of its population owning a mobile phone (the highest proportion in the world). It also has the cheapest rates for telephone calls in Europe. Part of Finland's success in becoming the world's mobile technology laboratory is the existence of a receptive business and legal climate, and a small but technology-friendly population. The founder and chairman of Digia, Pekka Sinonen, claims that the village will act as laboratory for testing new business models to accompany the technology: "the village will help identify business models from the processes in everyday life. Behaviour will drive technology - not the other way round".

Telecentre Best Practice

Following we offer the best Practice for a Cybercafe in Spain that is also valid for Latin American countries.

- 1.- Fundación IBIT: **telework from a holiday resort**
- 2.-Telecentro Gordexola: **non-commercial Telecentre**
- 3.-Telecentre of ASPAYM: **disabled people telecentre**

1.- Fundación IBIT: Telework from a holiday resort

IBIT means: *Illes Balears per a la InnovacióTecnològica*

1.Institution Name and Function

Fundación IBIT (Illes Balears per a la Innovació Tecnològica) was created in June of 1998, with Telefónica and the Caja de Ahorros of the Isles Baleares Sa Nostra as partners. Before this date it was called Institut BIT (Instituto Balear de Innovación Telemática) and was a department of the Regional Government of Isles Baleares.

IBIT's main task is the involvement and promotion of new technologies in the Balear Islands in order to achieve a complete integration in the information society.

2.Short description of the Initiative

Within the BIT Strategy, promoted by the Govern Balear under the framework of the European project TEM&TeN, three telecentres have been created in the islands with all the necessary telework tools.

In this project there are two telework initiatives:

- Creation of telecentres in the islands.
- Other telework initiatives, that consist in employees teleworking with a telework contract.

The objective is to attract more tourists throughout the whole year, and not only from May to September, the idea is that thanks to the Telecentres, visitors can carry out their work as if they were at home.

3.Innovative aspects, benefits and barriers

The telework development is directed in part to increase the tourist demand the whole year round, and not only in the summer months. Due to the islands' good telecommunications infrastructure, visitors can be offered the possibility to contact their offices in their respective countries.

On the other hand, telecentres bring telework nearer to SMEs and permit them to be more competitive.

The main benefits for local people are that "in this moment they can arrange an office in each island in order to use all the telecentres' services".

The benefit for tourists is that they have the chance to extend their holidays, they don't need to go back to their countries to work, because they could use the telecentres' services to telework and communicate with their companies from the islands.

Barriers:

- Lower efficiency of the teleworker, who is not used to work outside the office and to the different working hours.
- General ignorance about what telework is.
- Not much telecentre promotion.

4.Contact Information

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2. Telecentro Gordexola



This initiative constitutes the first, and up to now the most developed, rural telecentre in Spain. It is widely considered as an example for many other rural areas in the country that as trying to use this kind of institutions as instruments to overcome situations of structural crisis by offering new opportunities of economic activity.

Institution Name and Function

Telecentro Gordexola is a non-profit institution whose main functions are:

- Dissemination of the potential benefits of Information and Communication Technologies in the rural area (Valley of Las Encartaciones in the Basque Country) where Gordexola (1.500 inhabitants) is placed.
- Education and training aimed to facilitating the introduction of telematic applications in SMEs, and to increasing the skills of the inhabitants of the region to enter the Information Society.
- Promotion of telework, in order to retain local workers with new opportunities, and to attract highly trained workers from other towns.

- Telematic services for SMEs in Gordexola and in the surrounding region. These services include Internet access, e-mail boxes, and web pages design.
- Similar telematic services for local public administrations in the region.
- Demonstration projects in cooperation with enterprises.

Short description of the Initiatives

Two real teleworking projects have been developed up to now, benefiting from free use of teleworking modules granted by the municipality of Gordexola:

1.- THA, Telematic Habitat Advice (www.gordexola.net/tha)

Edorta Roman, a physicist, got a grant to start a teleworking project at the telecentre during a six-month period. His project is a service that provides weather reports for small homogeneous areas, offering reasonably reliable predictions on temperature, humidity, and speed and direction of winds.

To this aim the THA service gathers data, via Internet, from the Spanish National Meteorological Institute, and from other international entities, and elaborates on them a specific interpretation in order to carry out meteorological diagnosis, in the short and medium range, for any requested local habitat.

THA's users are very diverse, including public entities, fire departments, tourist agencies, police and civil protection units, organisers of fairs and conferences, harbour managers, insurance companies, hotel and catering businesses, sporting societies, highway managers, skiing resorts, thematic parks, yacht clubs, transportation companies, building businesses, agricultural associations, radio and TV stations, general and specialised press, and even individual customers for personal or professional reasons.

After the 6 month launching phase at the telecentre Edorta Roman is now offering his THA service from his own home.

2.- Zona de Carga (Loading Zone)(<http://legazpi.com/zona/index.htm>)

In May 1998 Legazpi, a merchandise transportation agency located in Galicia (several hundred kilometres away from Gordexola), contacted the telecentre with an offer to subcontract telework. The objective of this telework project was the design and implementation of an Internet-based service, aimed to transportation firms, to facilitate the exchange of loads between trucks at both national and international levels.

In June 1998 nine unemployed women from Gordexola were selected for this job. They were trained until December 1998, and then hired in January 1999 by the Town Council for six months to start working, in rotating shifts, at the telecentre modules. These teleworkers receive calls from transportation professionals, either through the Internet or by phone, feed with the information the exchange system, and update and manage the web service.

The project is now under evaluation in order to assess its future viability as an independent enterprise without public funding.

Innovative aspects, benefits and barriers

The main innovation implied by *Telecentro Gordexola* has been the pioneering introduction by a public initiative of information and communication technologies in a rural area.

The two telework projects that have been developed constitute valuable and innovative demonstrators of the possibilities offered by the application of these technologies in rural environments in situations of structural crisis.

The THA project has shown the potential of telework schemes to attract qualified professionals to living and developing their activities in traditionally rural areas. In this way new perspectives can be opened for a social and economic reactivation of those areas, and at the same time, professionals who would prefer living in a more natural environment can fulfil their wishes without wasting their valuable skills.

The *Zona de Carga* project shows how teleworking, combined with appropriate training, can open a chance to create sustainable jobs for disadvantaged groups in rural environments, such as unskilled and/or unemployed people (women in this case).

The main obstacle that has appeared as a limitation to the promotion of teleworking in *Telecentro Gordexola* lies in the scarcity of feasible project proposals, and of local people with enough entrepreneurial spirit and abilities to carry them out. In fact some other projects proposals have been checked and finally rejected due to a combination of those two drawbacks.

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3. Telecentre of ASPAYM: disabled people telecentre

The main objective of this telecentre is the professional inclusion of physically handicapped people so that they could become productive, independent and financially secure, using information and communication technologies. Through telework, the project aimed to develop their abilities in this area, helping them to sell their services and therefore to contribute towards their full professional and social inclusion.

In Spain, for example, there are 35 000 paraplegic and quadriplegic persons. As to age groups suffering from these disabilities, the majority is young - around 53% - and live in the centre and north of the country.

It is very significant the fact that every year 1 200 new persons receive these types of injuries, mostly within the age of 20 to 30 years. As to literary qualifications, 27% finished high school, 14% received technical training and only 6% have a university diploma. But we must stress that 62% are presently studying in these various academic levels. This reveals their will to

pursue their lives and become independent on their own. If we take into account that 78% of these persons are unemployed, their effort is very understandable and praiseworthy.

Another issue of paramount importance are the pensions: they will lose their right to pension if they work. Only 14% of the disabled persons own a computer, the same percentage of households in Spain connected to the Internet.

This Telecentre was born within a project “Telework for Disabled” (T4D) funded partially by the Directorate General XIII of the European Commission, under the Telematics Applications programme, and partially by other partners like ECTF (European Community Telemarketing/Telematics Forum), ASPAYM-TO (Paraplegic and Disabled Association of Toledo), the National Paraplegic Hospital of Toledo and TSAI (Telecom Group).

The main project’s objective is to further validate and demonstrate the usability and viability of a disabled teleworkers telecentre in order to improve the job opportunities for a selected group of mobility handicapped people as part of an overall recovery and social re-insertion process.

Steps for the project

1. Identify, select, train and give support to the disabled teleworkers participating in the project (20 persons).
2. Provide the telecentre (validation site) with the required equipment.
3. Adjust and customise the existing telematics platforms in order to meet the specific requirements of the disabled teleworkers.
4. Carry out a marketing campaign aimed at promoting the social and tax related advantages of hiring disabled teleworkers.
5. Validate, demonstrate and evaluate the pilot trial.
6. Become a profitable centre.

Market opportunity

A detailed analysis of the market opportunity clearly demonstrates that Telework is a growing phenomenon that will bring great value both to companies looking to outsource non-core services as well as to potential Teleworkers, by fulfilling currently unmet market needs.

Taking into account the referred unemployment figures of the disabled in Europe, the enormous excess of demand over supply in the IT area is a great opportunity for them. Most of the disabled population is unemployed because of problems with mobility, health, accessibility and the lack of interest companies have in hiring disabled people. Through telework, and with the proper conditions, these disabled people will be able to be more productive and lead a fuller life.

Actually there is a great IT worker shortage:

- 133% increase in those employed in IT 1988-1996
- Currently 300,000 unfilled positions in information technology area
- There will be a need for approximately 1.3 million new computer engineers, computer scientists, programmers, and systems analysts over the next decade.

As regards IT salaries, there is a great potential for high income. For these reasons, telework is an opportunity:

- Growing Trend
- Cost Effective
- More Productivity
- Larger Scope of Potential Employees
- Importance of Outsourcing in Business Strategies

Telecentre Companies capable of providing Outsourcing services

- Change aversion in companies
- High Quality Services
- Added Value/Highly Specialized Services
- Work for Medium/Large Sized Companies in Europe
- Pull strategy using the Media
- Special events to divulge the project
- Advertisement and Promotion
- Generate more Customers
- Obtain Teleworkers
- Clarify advantages of outsourcing
- Make aware of the advantages of choosing the telecentre
- Identify new opportunities in companies
- Newspapers
- Website
- TV Reports
- Organisation of Workshops
- Media's Interest
- Meetings to demonstrate services
- Depends on service
- Lowest price is not the telecentre's goal
- Bigger savings due to high quality and telework
- Price determined by amount of savings generated

Equipment

Internet Server Provider

• Internet is an essential tool for Teleworkers. It is necessary to provide one Cable, ISDN or conventional connection per Teleworker.

Hardware

- Depends on the area the Teleworker will work in
- Basic hardware could be –
 - 1 PC
 - 1 Printer
 - 1 Scanner
 - 1 Monitor
 - 1 pair of headsets
 - 1 Backup system

Software

- Standard Software to facilitate integration
 - Basic -
 - Windows Millennium
 - Office 2000
 - Project 2000
- Telephone is essential for Teleworkers

•ISDN phone lines or ADSL connections

ISDN / ADSL Card

Specific equipment for disabled teleworkers

- Screen reader: for blind people
- Screen magnifier: individuals with poor vision
- Braille and Dynamic Braille: special Braille display
- ShowSounds and SoundSentry: for deaf people
- Scanning software: it highlights selection choices one at a time
- Alternate Keyboards
- Pointing devices
- Voice recognition systems

Human Resources

The selection of the candidates is a tough question. It is important to know how to recruit Teleworkers and to develop a Teleworker's profile to follow. In order to select teleworkers we must:

- filter the potential Teleworker analysing their CVs taking into account the Teleworker's profile
- Interview the candidates

Publicity & Marketing Image & Media

- Promotion of the telecenter's image
- Elaboration of charts and layouts for public presentation
- Releasing of information on the telecenter by periodical publication of articles and other press releases
- Ads to recruit Teleworkers
- Ads to generate clients

Training and integration of the disabled teleworkers

The manager should establish some important points in order to be successful:

- the services that will be provided
- hardware specifications
- software specifications
- the number of hours of work per day
- quality standards to be met
- quantification and evaluation of work quality
- expected results.

Basic training should include:

MS Windows

MS Office 2000

MS Project 2000

MS Internet Explorer

MS Outlook Express

MS Messenger

MS Netmeeting

Specific training should include programs depending on specific working areas since requires area more technical and deeper software.

Due to the specific conditions of the trainees, some conditions must be taken into account:

- •Location must be accessible
- •Ask trainees about any special needs
- •1 computer per teleworker
- •PCs must meet minimum system requirements for software used

Communication inside the telecenter

Its a key factor that must be promoted, via

- Telephone
- E-mail
- Instant Messaging
- Voice chat

Manager qualities

- •Technical Level
- •Administrative Level
- •Operational Level
- •Setting up routines
- •Organisation of activities ensure the quality of the services provided
- •Keeping to deadlines.
- •Build teams and promote communication between teleworkers.
- •Coordinate, monitor and control the work flow between the teleworkers.
- •Organize a daily reporting structure
- •Promotion of Meetings
- •Motivation
- •Support Tasks
- •Interface with the clients
- •The Contract

Quality control

- •Periodic interviews with the outsourcer
- •Random auditing of the Teleworker's outputs
- •Weekly interviews with the Team Managers
- •Periodic interviews with Teleworkers to determine their level of satisfaction, and analyse the work in progress

Disabled Teleworker Telecentre Guidelines

Guideline 1: Overcome existing misconception through a more precise communication

There appear to be considerable misconceptions in society about people with disabilities. These tend to extend limited or focussed liabilities (e.g. paraplegics) to a whole person in the sense that a person with a physical disability was automatically given the category of disabled also for work. To put it more graphically, it appears that a person that can not walk because of a focussed spinal cord injury can not think either.

This situation can only be overcome by means of a very aggressive communication policy directed to analyse this absurd conclusion (if he can not walk he can not think either) and emphasise the positive attitude that, in general, disabled people have towards work.

Guideline II: Involvement of support organisations

The involvement of supporting organisations is essential, at least, for the initial setting up and development of the telework pilot schemes. Although telework appears as very commonsense tool for handicapped people, it is still a very innovative way of work and a very new concept that requires not only support from the institutions working with disabled people but also a good understanding and knowledge of its potential and how it can be implemented.

In the particular case of the T4D Project, the role of the supporting organisations has been of vital importance to all phases of the Project; from the conception of the idea to the real implementation.

Guideline III: Develop strategic alliances with other market players

One of the most challenging facts is that the labour market for teleworkers in general, and disabled teleworkers in particular, is very immature or almost non-existent. Some key market makers are electronic or e-business oriented associations that represent organisations already familiar with the basic technologies and therefore more inclined to resort to these new ways of work. Local and distance training organisations are also relevant.

Guideline IV: Strengthen the positive attitude of disabled people to work in general

Disabled people can be as serious with regard to work as anybody else. Disabled workers are usually more committed to work than non-disabled people and could be willing to work in spite of not being in the need for it (the benefit trap) as their need for self-fulfilment through work tends to be higher or stronger. Therefore, they should be positively encouraged to work, taking advantage of these new opportunities.

Unfortunately, most government incentives to employ people with disabilities are based on the unjustified assumption that companies need to be compensated for the low productivity associated with workers with disabilities.

Guideline V: Moving disabled people from welfare to work

In addition, to the particularly low employment rate, people with disabilities of working age are out of the labour market altogether and heavily dependent on disability benefits.

These benefits can often reinforce recipients' exclusion from the labour market - creating a benefit trap. Therefore, action in this field is required and raising employment levels is a priority. In this context, telework is a powerful weapon as it eliminates some of the obstacles traditionally encountered by people with disabilities.

Guideline VI: Not employing people *with* disabilities has also a socio-economic cost
Income maintenance for disabled people is now the third largest item of social protection expenditure in the European Union, after old-age pensions and health care, but ahead of unemployment benefits. The costs of this type of social protection have to be borne by society, which means by those who pay social contributions. Employers are the largest contributors, and this underlines why their social commitment is so important and why prevention of disability and disability management have become elements of a modern human resources policy.

Guideline VII: Make provision for minor disabilities associated to major ones
Disabilities usually appear as a cluster. This is not in contradiction with recommendation one as in that case a real major disability (paraplegia) may be associated to a major albeit non-real one (inability to think). The main message here is that the ergonomic aspects must be considered in a holistic way to foresee for these clusters that may include a set of minor but relevant disabilities associated with a major one.

Guideline VIII: The enabler potential of telework to overcome physical barriers

Problems with standardisation are of special importance when technical aids have to be used for communication and are to be compatible with existing equipment and applications.

A significant portion of our population has disabilities (acquired at birth or through accident, illness or natural ageing) which prevent them from using conventional computers and software but there are certain low-cost or no-cost modifications that can make them accessible and, therefore, increase the number of individuals who can use standard computers.

The current direction in which computer systems are evolving will automatically encompass many or most of the required features and capabilities if the new design directions are implemented carefully and this implies a direct benefit on the mass market as well. Many of the desired changes could have been included in the design of computers originally if the developers had been aware of the need for and impact of such changes.

Guideline XI: Providing Environmental control when the teleworkers suffer severe disabilities

Using an Environmental Control Unit (ECU) will increase independence and allows individuals with a disability to control aspects of their environment that are operated by electricity (lights, electric doors and shutters, alarm systems, telephone, etc.). These systems can be voice-activated, eliminating the need to use one's hands.

Guideline XII: Training of disabled people must be highly customised and as much personal as possible

Training of disabled people must be highly customised and as much personal as possible. This is so because the universe of departure at a Telecentre facility is usually rather small so every person counts. Not a single person should be left behind because of the content of training being poorly adjusted to his/her real needs and personal abilities. This is not a case of massive training where one can always assume that a critical mass of people will end up getting most of the training benefits. And this training should be very personalised because of all the relevant psychological aspects that are also involved. The language to be used, the messages to be delivered, as well as the timing for them, must be carefully planned to avoid negative reactions from a rather higher than usual sensitive audience. This does not rule out completely the possibilities for distance training but rather emphasises the need to carefully design and deliver the contents and modalities (on line/on site) of training.

Guideline XIII: Training should be delivered in small incremental doses

Disabled people in general have certain restrictions such as rehabilitation and occupation therapy, transportation assistance, more time to get in and out of the training facilities and other restrictions that prevent them from attending normal training schedules and, therefore, demand adapted training delivered in small incremental doses.

Experience has shown T4D partners that short courses and shorter class hours delivered in an incremental way in different periods during the year is more appropriate than short and intensive courses.

Guideline XIV: The use of a virtual (web based) electronic agency to promote the acquired telework skills of disabled people as well as to favour their collaborative work seems to be a handy tool to help to create a market for these new teleworkers

This is so because an electronic agency seems to be the most cost effective option to market these new skills amongst target organisations. It has a lower cost than any other option and is usually oriented to organisations that are already familiarised with ICT technologies (and Internet in particular) and are more receptive to incorporate distance workers in their (partially) electronic business and work processes.

Guideline XV: Focusing on finding the person with the appropriate skills to do the job rather than relying on grants and subsidies.

In some cases companies consider the grants perceived when employing people with disabilities insignificant and are more concerned about their employees' technical capacity and experience for the job. If the qualification level of the disabled workforce was increased this would provide equal opportunities for everybody to access the labour market.

Guideline XVI: To sell telework is to sell solutions

Telework if understood as using computers and telecommunications to change the accepted geography of work, also implies changing the nature, rules and roles of traditional work. Among other things, telework means working by results. Whoever buys telework does not intend to buy working hours, but intends to buy results. And, if it is bought through a fully integrated platform as T4D, it buys just in time human resource solutions, key to compete in the new networked economy.

Guideline XVII: A state of the art telework platform (T4D) must evolve into an intelligent human resource portal.

Having developed a state of the art telework platform, experience has shown that, from a technical point of view, it should evolve into a system based on XML capable of supporting intelligent agents. This will allow the automatic exchange and integration of relevant information and will secure an acceptable transfer of communication amongst the different human resource management systems present in the digital market.

This evolution will also lead to a better understanding of the status and foreseeable evolution of this incipient virtual world of information society workers.

Guideline XVIII. Develop an aggressive pro-active marketing strategy

Once the web site is open on the Internet, marketing, marketing and more marketing seem to be the main key for success. Resist the temptation to think that just on-line marketing will do it. Off-line, even door-to-door marketing has proven to be far more important.

Offering ability, not disability is another key issue when dealing with people with disabilities.

Guideline XIX: Evaluate to learn

Set-up an on-going Monitoring and Evaluation loop to provide timely feed-back to key operational managers as well to all relevant stake-holders. Subsequently, communicate to all relevant participants that the evaluation being carried out is mainly oriented to strengthen the learning process and not to make a summative judgement.

Guideline XX: Success stories have to go around

A positive experience in employing a person with disabilities heard directly from another employer can be a convincing argument. If a network of employers who employ people with disabilities is created it makes it easier for job finders and mediators to identify a suitable work placement for a person with a disability. Bringing employers together to exchange ideas rather than contacting them one by one can start a thinking process leading to the creation of job opportunities. This has been the aim of the T4D Project which has built a community of potential disabled teleworkers and potential employers interested in placing these.

Cybercafe Best Practice

Best Practice in Spain



Following we offer the best Practice for a Cybercafe in Spain that is also valid for Latin American countries. For this reason the text is written in Spanish

Que ofrece el Cybercafé.

Básicamente, el cybercafé está en disposición de ofrecer todo el "software" y el "hardware" necesario para una navegación placentera a través de Internet y de todos los servicios asociados a la red. Los *servicios habituales* que puede ofertar un cybercafé son los siguientes:

- Navegación por Internet: búsqueda de información, específica o no, a través de las millones de páginas que existen en la red.
- chat: Conversación escrita en tiempo real con cualquier parte del mundo.
- Correo electrónico: envío de mensajes particulares, comerciales o de contacto a través de Internet.
- FTP: Transferir o enviar ficheros con información desde un servidor hasta nuestro ordenador o viceversa.
- News: Grupos de conversación, consulta y noticias sobre temas específicos.
- Telnet: Conexión real de nuestro propio ordenador con un servidor externo.
- Teleconferencia: Charla con microauricular con cualquier persona del mundo en tiempo real, con coste reducido.
- Videoconferencia: Charla asistida con videocámara, en tiempo real con cualquier parte del mundo.
- Juegos en Red: Competición entre varios usuarios de un mismo juego, tanto en red local como a través de Internet.

Por supuesto, a estos servicios hay que añadir los de bar, cafetería, cervecería o restaurant y suele acompañar a cualquiera de las actividades antes descritas.

El uso de los diferentes servicios que ofrece Internet se ve reflejado en la tabla que sigue a continuación:

- Navegación: 18%	- Telnet: 2%
- Chat: 33%	- Teleconferencia: 1%
- Correo electrónico: 35%	- Videoconferencia 1%
- FTP: 3%	- Juegos en Red : 2,5%
- News : 4%	- Otros : 0,5%

Los precios oscilan entre las 300 ptas. y las 800 ptas., por hora de conexión, dependiendo de la zona geográfica y la categoría del local.

Estos datos son subjetivos de cambio, dependiendo del uso que se de en cada uno de los establecimientos, pero que ofrecen una visión conjunta del fenómeno y del grado de conocimiento del medio.

Otros locales de conexión a Internet.

Si pudiéramos catalogar a las diferentes "variedades" de cybercafés, nos encontraríamos con diversos establecimientos, cada una con su propia filosofía comercial de negocio, pero con un mismo vínculo: *ofrecer conexión desde sus locales a Internet.*

Como consecuencia de la aparición de los cybercafés han surgido otros establecimientos conocidos como "Centros de Conexión", "Salas de Internet" o "Locutorios", que, aunque son conocidos por el nombre genérico de cybercafés y ofrecen el mismo servicio de Internet, incluso más, no ofrecen un verdadero servicio de hostelería.

Estos establecimientos pueden ofrecer un "pseudo-servicio" de hostelería (máquinas de café o de refrescos enlatados), pero no son cybercafés. Estos establecimientos, además de los servicio básicos, ofrecen servicios ofimáticos (fotocopiadora, fax, impresoras, scaneer, etc.), por lo que claramente se diferencian del servicio prestado por los verdaderos cybercafés.

Con el avance de la tecnología de consumo, han aparecido diversas maneras de "hacer Internet". Relativamente reciente es la aparición de "máquinas de Internet" (Internet Kiosks), al estilo clásico de los videojuegos o tragaperras, máquinas compactas que incluyen monitor, ratón y teclado y que su funcionamiento se basa en la introducción de monedas. A medida que se consume el tiempo se inserta una nueva moneda y puedes continuar la conexión. Sin embargo, estos aparatos han permitido otro tipo de negocio, hasta ahora negado a todos aquellos que no dominaran el mundo de la informática o Internet.

Con la aparición de estas "máquinas tragaperras", normalmente en régimen de contratación parcial (al 30, 40 o 50% según los casos) y sin ningún tipo de mantenimiento por el contratante, o de alquiler por máquina o temporada, otros establecimientos han surgido a su alrededor. Locales de ocio (bares y restaurants principalmente), mercados, almacenes, grandes superficies, estaciones de trenes y autobús, se han subido al carro y ofrecen servicio de conexión a sus posibles clientes.

Todas estas variaciones quedan lejos de la verdadera razón de ser del cybercafé. Pero este es el futuro de Internet y de todo lo que lleva consigo: *conexiones desde cualquier lugar para enlazar con cualquier parte del mundo.*

Cybercafés en el mundo.

El primer cybercafé, el que inauguró este tipo de establecimientos, el padre de todos, atendiéndonos a la definición conocida de Cybercafé = Café+Internet, es el *Electronic Café International*, en Santa Mónica, California (USA), en el ya muy lejano año 1984. Entre sus principales atractivos se encuentra la conjunción de la realidad del propio local con su propia realidad virtual, ofreciendo encuentros comunes a través de videoconferencia o grandes partys, todo ello amenizado con los mejores Dj's del momento. Más adelante surgieron diferentes locales en otras partes del mundo. Estos son algunos de los pioneros que pueden servir de ejemplo para el desarrollo en Iberoamérica.

- En Europa:

- BerZyber, (Berzelius Highschool), Linköping, Suecia
- Bytes, Belfast, Irlanda del Norte
- Cyberia, London, Inglaterra
- MySTèR 2000, Amsterdam, Holanda
- Peak Art Cyber Café, Stockport, Inglaterra

- En Norte América:

- Cafe Renaissance, San Diego,
- Texas Cafe Liberty, Cambridge, Massachusetts
- Internet Cafe, Seattle, Washington
- Internet Cafe - Scranton, Pennsylvania
- ICON-Byte Bar&Grill, San Francisco, California
- Paper Moon Espresso Cafe - Ashland, Oregon
- Red Light Cafe - Atlanta, Georgia
- The Habit - Portland, Oregon
- CyberPerk, Ottawa, Ontario
- The Internet Cafe, Prince George, British Columbia
- Yaletown Benny's Bagels, Vancouver, British Columbia

- Asia

Cyber Cafe Club, Hong Kong

Cybercafés en España.

Más de 10 años tarda en aparecer en España el fenómeno "cybercafé". Estamos a mediados de 1995. En Madrid, en la calle General Perón, nace el primer cybercafé español : *La Ciberteca*.

La Ciberteca, dentro de su actividad como consultora en nuevos sistemas de comunicaciones (desarrollada desde 1994) inauguró, en Mayo de 1995, el primer centro de acceso público a TCI (Tecnologías de Comunicación e Información) y teleactividad de España, lo que en ocasiones se ha llamado "cibercafé", pero que supone un concepto mucho más desarrollado.

Su objetivo ha sido desde sus inicios el proporcionar un acceso público generalizado a la red internacional de comunicaciones Internet, en un local donde se combinan teleactividad, ambiente café-bar de socios y todo tipo de recursos y proyectos añadidos que enriquezcan a nuestra comunidad de referencia.

En Barcelona, un mes después, se inaugura el segundo local público, el primero en el área de Catalunya: *El Café de Internet*. Este establecimiento cuenta con una gran sala de ordenadores (15), y con un completo servicio de Hostelería, desde copas a tapas, bocadillos y comidas.

A partir de aquí, el *boom de Internet* es de dominio público. No hay día en que los medios de comunicación nos bombardeen con una palabra que hasta el momento sonaba más a ciencia-ficción que a realidad : Internet. Y sin embargo, la gente de la calle (no sabe, no contesta), desconoce que es verdaderamente un cybercafé o Internet pero intuye que algo grande está apunto de ocurrir.

En España, el efecto "cybercafé" es concluyente. Las cifras hablan por si solas:

A finales de 1995 sólo existían dos o tres cybercafés, La Ciberteca y El Café de Internet entre ellos; en 1996, abren sus puertas aproximadamente 80 nuevos cybercafés. En 1997 la cifra aumenta a más de un centenar y a mediados de 1998 ya son casi 150.

A finales de 2000, hay unos 300 establecimientos en toda España, con representación en casi todas las provincias del país los que ofrecen conexión a Internet. Aunque algunos locales que han intentado la experiencia se han quedado en el camino, la mayoría sigue al pie del cañón. Catalunya es la comunidad autónoma con mayor proyección, seguida muy de cerca por Anas la

Ejemplo de Best Practice :
TangaWorld Interbar, el primer bar informático de España.



Si el honor de ser el primer establecimiento con conexión a Internet es de La Ciberteca, no es menos cierto que otro local catalán merece ser destacado por su dedicación al mundo de la informática dentro de los locales de ocio.

TangaWorld Interbar, en la playa de Castelldefels (Barcelona) fue el primer local público en nuestro país en aplicar la informática al consumo diario de sus clientes.

En 1992 puso en marcha las primera BBs pública (Bulletin Broadcaster System) dando la posibilidad a sus clientes de conectar con otras BBs. Este sistema, desarrollado en Clipper y puesto en marcha conjuntamente por TangaWorld e Input Informática fue un éxito total. Desde él podías conectar con otras bbs, enviar y recibir mensajes y consultar diferentes tableros de ofertas (compro, vendo, cambio). Para su uso era necesario el uso de un login y un password que identificaba a cada uno de los operadores y con el cual accedías al sistema. Más de 2000 operadores estuvieron registrados en la BBs central de TangaWorld , hasta que sus propietarios decidieron dar el salto a Internet en Febrero de 1996, convirtiéndose en uno de los primeros cybercafés de España.

Pero quizás, una de las peculiaridades de este local, además de su apuesta informática es ser igualmente el único museo de Europa dedicada a una marca de refrescos: *Coca-Cola*. Este museo, formado por más de 6000 objetos diferentes de todas las épocas, se encuentra dentro del propio bar, donde no hay rincón que no aparezca el logo de esta marca. Debido a esta afición, desde el web de TangaWorld, uno de los más grandes del mundo dedicado a un único establecimiento, formado por 500 páginas htm y más de 1500 diseños y fotografías, se puede hacer un extensivo tour para conocer su interior, su colección o leer la primera Historia de Coca-Cola publicada en Internet, más de 40 páginas htm con un centenar largo de fotografías.

Otro de los servicios que ofrece el web de TangaWorld es:

- "Cybercafés de España", la lista más actualizada de España, donde puedes acceder desde tu ordenador a todos los cybercafés o cyberlocales españoles que tengan web operativo en Internet.
- Una extensa carta de cervezas (más de 100 marcas de importación)
- Un completo surtido de combinados propios (más de 50 tipos diferentes de mezclas)

Todo ello hace que este local lleve casi 25 años al servicio del ocio y la diversión y la concepción de un verdadero Cybercafé, siempre que nos atengamos a la definición básica de cybercafé = Café + Internet

Nota curiosa : TangaWorld no tiene cafetera !!!

El futuro de los Cybercafés en España y Latinoamérica.

Si algo hay que agradecer a los cybercafés españoles es la difusión de un medio poco conocido, hasta hace poco, como es Internet. Qué local no ha recibido en sus salas a personas interesadas en crear su propia web, en obtener su propio e-mail o interesados en la búsqueda de información concreta sobre un tema determinado.

Profesionales de todos los medios se han interesado por un medio que facilita la diversificación de ideas y proyectos, aunando en un solo click de ratón el pasado el presente y, sobre todo, el futuro. Su labor de ayuda y formación es, ha sido y será, la principal herramienta de unión entre el profano y el medio.

El cybercafé ha sido el primer punto de apoyo para aquel que ha querido conocer un medio moderno de comunicación. Dentro de pocos años, cuando el uso de Internet esté suficientemente generalizado y cada familia disponga de un ordenador para conectarse a Internet, quizás, sólo quizás, la tarea del cybercafé, como nexo entre el usuario e Internet ya no sea predominante.

Sin embargo lo que no desaparecerá será el espíritu con el que han nacido este tipo de establecimientos. El cybercafé acostumbra a estar totalmente actualizado, siempre pendiente de la última novedad, tanto en "soft" como en "hard"; el cybercafé dispone de líneas de conexión habitualmente mucho más rápidas y fiables, (RDSI) que las conexiones personales a través de un servidor y nadie puede negar el atractivo añadido de una copa o un buen café durante la navegación de turno. Quizás ya no será "negocio", pero indudablemente, como oferta de ocio seguirá siendo vigente. No olvidemos que los cybercafés nacieron de la simbiosis entre dos elementos básicos en las relaciones humanas: ocio y tecnología y que no pueden extrapolarse uno de otro, ya que, en las puertas del año 2000, estos dos términos van unidos de la mano.

Una de las grandes virtudes de Internet y también de los cybercafés es el hecho de haber conseguido que personas habitualmente reacias a los ordenadores se hayan aficionado a él, o como mínimo hayan navegado en alguna ocasión.

Cybercafes in Mexico

Ante el gran avance que se ha registrado en el ámbito de la telemática y debido a las amplias aplicaciones que ésta puede tener en distintas áreas de la vida, actualmente las autoridades mexicanas están interesadas en encontrar formas de dar acceso, sobre todo a la población de bajos recursos, a las tecnologías de la información y de las telecomunicaciones. Cabe aclarar que, en México, comprar equipo de cómputo resulta muy caro y que 35% de la población tiene ingresos equivalentes a 1 y 2 salarios mínimos.¹ Una de las opciones que se han vislumbrado en este sentido es la creación de telecentros comunitarios, de acuerdo con lo que establece el Programa de Desarrollo Informático 1995-2000.

En particular, en el caso de la Ciudad de México, los telecentros pueden contribuir no sólo a permitir el acceso de la población a las herramientas telemáticas, sino también a crear empleos. En algunas visitas que Famser e Innova han hecho a cibercafés del Distrito Federal, se ha visto que la apertura de este tipo de establecimientos ha posibilitado a profesionistas de diversas áreas (arquitectos, traductores, comunicadores, contadores, secretarias e informáticos, entre otros), por ejemplo, volverse a emplear después de varios meses de estar desocupados. Asimismo, se ha observado que los telecentros, instalados en zonas estratégicas, pueden contribuir a disminuir el tránsito vehicular y, por tanto, la contaminación del aire; cabe señalar que en la Ciudad de México diariamente circulan 3 millones de vehículos que, a su vez, producen 78% de la contaminación atmosférica.

Por todas estas razones Famser e Innova tienen interés de establecer en la Ciudad de México un telecentro piloto de carácter polifuncional. Como un primer paso y para enriquecer la base de datos del Observatorio, iniciamos un estudio sobre el estado de los cibercafés en México, utilizando los registros que tiene la Asociación Mexicana de Cibercafés (AMCC).²

La AMCC se creó con los siguientes objetivos:

- Promover nacional e internacionalmente los cibercafés existentes en la República Mexicana.
- Comparar un sitio en el cual la gente tenga acceso a la información de los diferentes conceptos, servicios, eventos y promociones que ofrecen los cibercafés de México.
- Establecer un vínculo de comunicación entre los asociados para brindar y obtener tanto asesoría como apoyo logístico, administrativo y técnico.
- Generar servicios de uso común que permitan la generación de oportunidades de negocio en todos los cafés asociados.

La AMCC define el cibercafé como un “espacio de características agradables, en el cual el asistente puede acceder de forma rápida y eficiente todos los servicios que en Internet se ofrecen; se puede utilizar software de procesadores de textos, hojas de

¹ Un salario mínimo es equivalente a un poco más de 100 dólares.

² <http://www.amcc.org.mx>

cálculo, todo esto haciendo uso de equipo periférico como: impresoras, escaners, videocámaras, etc., disfrutando, además, del ambiente y los servicios que tradicionalmente ofrece un café”.

No obstante que el concepto de telecentro es más amplio que el de cibercafé, contar con información sobre la evolución que han tenido los distintos establecimientos del ramo de la telemática es de gran utilidad para medir el impacto que puede llegar a tener la creación de un telecentro piloto de carácter polifuncional. Nuestros primeros hallazgos al respecto se muestran a continuación.

Cibercafé en México

Como se puede observar, la AMCC tiene 286 cibercafé registrados en toda la República Mexicana, y llama la atención que la mayoría se concentra en las zonas urbanas de los estados, así como en el Distrito Federal, el Estado de México y Veracruz.

Cibercafé registrados en la AMCC por entidad federativa, 1999

<i>Estado</i>	<i>Número</i>	<i>Porcentaje</i>
Aguascalientes	4	1.4%
Baja California	4	1.4%
Baja California Sur	2	0.7%
Campeche	5	1.7%
Chiapas	10	3.5%
Chihuahua	5	1.7%
Coahuila	10	3.5%
Colima	0	0.0%
Distrito Federal	42	14.7%
Durango	5	1.7%
Estado de México	24	8.4%
Guanajuato	4	1.4%
Guerrero	7	2.4%
Hidalgo	3	1.0%
Jalisco	17	5.9%
Michoacán	15	5.2%
Morelos	8	2.8%
Nayarit	0	0.0%
Nuevo León	7	2.4%
Oaxaca	7	2.4%
Puebla	9	3.1%
Querétaro	6	2.1%
Quintana Roo	8	2.8%
San Luis Potosí	2	0.7%
Sinaloa	18	6.3%
Sonora	15	5.2%
Tabasco	11	3.8%

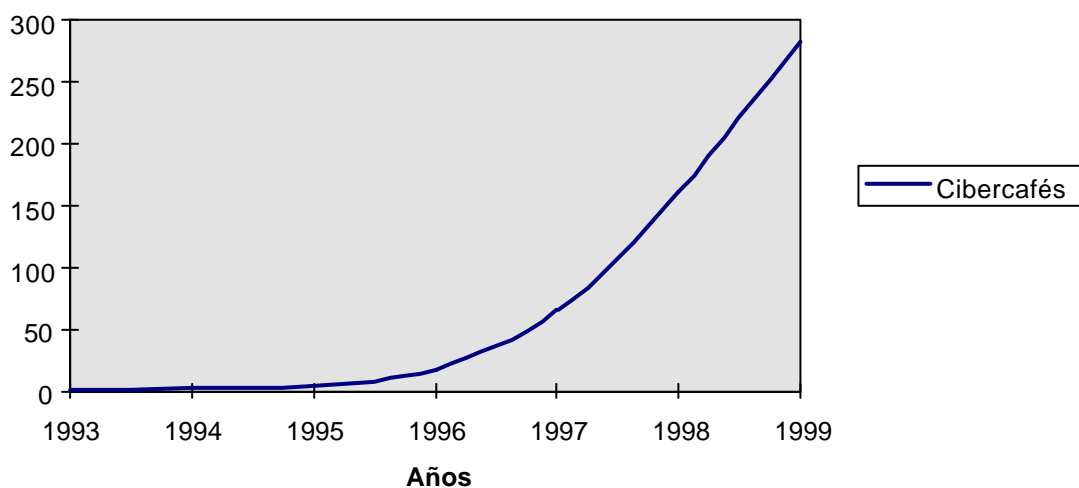
Tamaulipas	7	2.4%
Tlaxcala	3	1.0%
Veracruz	24	8.4%
Yucatán	2	0.7%
Zacatecas	2	0.7%
Total	286	100.0%

Los primeros cibercafés comenzaron a funcionar entre 1993 y 1994, pero es a partir de 1996 cuando empiezan a mostrar un crecimiento significativo y continuo.

Cibercafés registrados en la AMCC por año de inicio de actividades, 1993-1999

<i>Años</i>	<i>Número de cibercafés</i>	<i>Porcentaje</i>
1993	1	0.3
1994	1	0.3
1995	2	0.7
1996	14	4.9
1997	47	16.4
1998	96	33.6
1999	123	43.0
ND	2	0.7
	286	100.0%

Crecimiento de los cibercafés en México, 1993-1999



Cibercafés del Área Metropolitana de la Ciudad de México

Puesto que es de nuestro interés instalar el telecentro piloto en el Distrito Federal, decidimos ahondar en las características que tienen los cibercafés de la Zona Metropolitana de la Ciudad de México (ZMCM), que en total suman 61.³

Tarifas

En promedio, los cibercafés cobran 28.50 pesos (casi 3 dólares) por hora de consulta en Internet, con un máximo de 60 pesos (6 dólares) y un mínimo de 15 (1.50 dólares). Sin embargo, casi el 75% ofrece promociones de diversos tipos, como memebresías y descuentos.

Tarifas que cobran los cibercafés de la Ciudad de México registrados en la AMCC, 1999

<i>Tarifas</i>	<i>Número</i>	<i>Porcentaje</i>
15.00	2	3.3
20.00	10	16.4
25.00	18	29.5
26.00	1	1.6
27.00	2	3.3
30.00	16	26.2
35.00	4	6.6
36.00	3	4.9
40.00	1	1.6
50.00	3	4.9
60.00	1	1.6
Total	61	100.0

Servicios que ofrecen

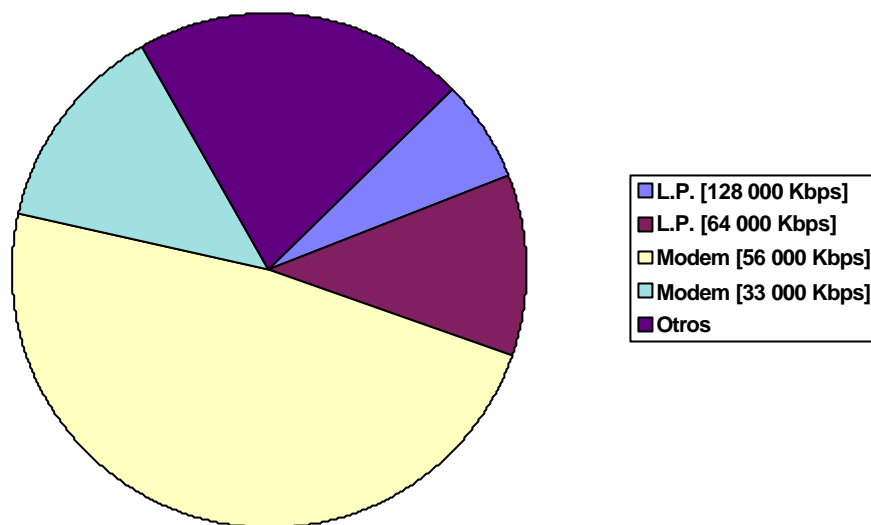
Además de los servicios relacionados con el entorno de Internet (consultas en Internet, creación de páginas web, e-mail, chat, etc.), 84% de los cibercafés de la ZMCM registrados en la AMCC ofrecen otros adicionales como asesoría, cursos, instalación de redes, escritorio público, renta y venta de equipo de cómputo, fotocopiado, escáner, biblioteca y fax público, entre otros; además la mayoría (79%) ofrece atención al público en otros idiomas aparte del español (predomina el inglés, aunque también existen algunos establecimientos que manejan otros idiomas como el francés, el italiano y el hebreo, entre otros) y 75% de ellos cuentan con servicio de cafetería.

Infraestructura instalada

En promedio, los cibercafés de la ZMCM tienen 7.9 computadoras, principalmente PCs, con un máximo de 20 y un mínimo de 2. Asimismo, el número promedio de impresoras con que cuentan es de 2.1, con un máximo de 4 y un mínimo de 2. Finalmente, como se puede observar en la siguiente gráfica, predomina el uso de modem para establecer el enlace con Internet (62%).

³ La Zona Metropolitana de la Ciudad de México aglutina al Distrito Federal y a la zona conurbada del Estado de México.

Tipo de enlace a Internet que utilizan los cibercafés de la ZMCM, 1999



Sin duda, tanto la oferta como la demanda de servicios relacionados con Internet está creciendo, y al parecer los cibercafés efectivamente están funcionando como una buena alternativa para permitir a la población que no cuenta con un equipo de cómputo, el acceso a diversas herramientas telemáticas; de entrada –a reserva de que más adelante profundizaremos en este estudio– se puede decir que la creación de telecentros presenta perspectivas favorables en México.

EVALUATION AND RESEARCH

Many studies have considered the effectiveness of the numerous telecentres which have been built throughout the world. The International Development Research Centre (IDRC) of Canada held an international meeting on telecentre evaluation in September 1999 which produced an excellent overview with detailed examples. A paper giving the global perspective is reproduced as Appendix 2: *Telecentre Evaluation and Research: a global perspective* - R Gomez, P Hunt, E Lamoureux, IDRC. A recurring theme is the danger of telecentres becoming the means and the instruments for technological imperialism under the guise of community development: whatever models prove to be appropriate for the various communities in Latin America it will be of prime importance for those local communities to assume control over such developments from their inception.

Appendix 1

Experiments in community access to new communication and information technologies in Bogota

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ANTICIPATING THE FUTURE TO SEIZE THE PRESENT

The context

For more than a year and a half, working-class districts in Bogota have been the subject of three community experiments with access to new information and communication technologies (ICT). These projects involve the Neighbourhood Information Units (UIBs), which represent yet another form of what is known generically as telecentres. These are places where the public can gain access to information and communication technologies: they can function as experiments in rural and urban telephone service, community radio, documentation centres and public libraries, among others (see Website <http://www.idrc.ca/pan/chasquiSP.htm>).

These UIBs are located in working-class districts in three different zones of Bogota: Suba, Bosa and the Suroccidente ["Southwest"]. These zones are part of the outlying fringes of Bogota, and their links to the city itself are only tenuous. This means that they suffer serious shortcomings in basic public services, and they face severe problems in terms of the coverage and quality of education, health and transport, and low levels of social, cultural and economic integration on the part of their inhabitants.

The UIBs are the result of a project that was developed by two Colombian NGOs, Colnodo and Fedevivienda [2], and was financed primarily by the International Development Research Center, IDRC, of Canada. The objectives proposed by these two organisations for the UIBs can be summarised as follows: to help democratise communications by ensuring that information is converted into knowledge that is useful for communities. The intent here is to strengthen citizen participation and local management. Therefore, the project proposed a participatory approach to (i) producing information on the neighbourhoods where the units are located, on organisations that are conducting these activities and on the people engaged in them, and (ii) providing access to information that would be of interest to communities.

Following a process of selection, inter-institutional agreements were negotiated with three grassroots organisations in Bogota. These organisations are active in a variety of issues: low-cost housing and social development, local management, popular education and culture, and the alternative resolution of disputes.

The selection criteria used were these:

- Each participant should be a community organisation at the grassroots level in Bogota, legally constituted and recognised by its own community.
- It must have been in continuous operation for at least three years running.
- It must offer active participation for women, both in its management structure and in its activities.

The preponderant weighting in the selection process was given to the candidate organisations' capacity for management and social interaction [3] . The organisations selected were the Fundacion Kerigma - Casa de la Cultura and the Fundacion Pepaso, which have more than 20 years of experience in community work, and the Fundacion AVP, a social development agency that is about to celebrate its 10th anniversary.

Putting together the project

The UIBs were established in the headquarters of each of these organisations, and were equipped with two computers with access to the Internet and email, as well as a printer and a scanner. The three organisations have libraries that are open to the public, and in two of them (Pepaso and AVP), the UIBs were located in primary and secondary schools that are part of their educational projects.

Colnodo and Fedevivienda were entrusted with providing definitions and basic guidance on the concept and design of telecentres and offering technical and technological support for their development. In addition, these two institutions have been assisting with work on a Coordination Project, through which they have provided training, advisory services and monitoring. The coordination work has also served as a bridge between the sponsoring organisations and the managers, and they have taken over the tasks of systematising and evaluating the project.

Each UIB is run by a Coordinating Team, consisting of two persons working part-time who are responsible for providing services to the public and for guiding users both in the handling and use of computers and in gaining access to the Internet. They are also responsible for administration and promotion of the UIBs and for the design and execution of information and training activities, both for members of the organisations and for outside users. In addition to their duties within the units, all the coordinators are busy in other activities (such as secretarial services, courier services, training and accounting among others) within their own organisations.

It is important to note that the UIBs did not all get up and running at the same time, not have they achieved the same degree of development. There have been considerable differences in the intensity and continuity of their work, for many reasons, ranging from technical difficulties and security considerations to the medical problems of some of the coordinators. Nevertheless, the three experiments have all been in operation now for between one and two years.

A bright new initiative

As happened earlier in the case of other means of communication and information such as radio, video or television, the arrival of the project generated great expectations among organisations and in various sectors of the community. The new equipment, the chance of access to new technologies and the "modernisation" they implied for carrying out their activities, and the prospect of improving and upgrading their activities led organisations to jump at this new approach with enthusiasm. One person interviewed declared that in Columbia "these things used to be only for those who have money, for certain social classes in the country, but now our communities can now use them directly, without intermediaries".

All the members of the grassroots organisations involved in the project are agreed in saying that one of the most important achievements was to take the units into the barrios

[low-income or working-class neighbourhoods] and to break down the "centralism" of the city. Nevertheless, they all recognise that their lack of technical and technological knowledge means that they were not sure of what they were getting into, or of how these new technologies were going to be able to help them in their work.

To be able to plug into e-mail, to access the Internet and eventually to develop their own Web page was not only an opportunity for these organisations, it was also seen as a kind of reward in recognition of their work, which they could never have achieved, either economically or technologically, without the help and support of other institutions.

With very few exceptions, the low-income segments of Colombian society have no access to these technologies, which are to be found only in the country's most important cities, and have not yet penetrated into the medium-sized cities, much less into rural areas.

People were fascinated with the project, and their eyes lit up the way they do when a camera flashes. But this did not leave much time for the organisations to work out just how they were going to mesh the telecentres with the central focus of their activities. For them it was enough just to dream of the possibilities and opportunities that these units could hold for their communities and for their own organisations, by providing access to new technologies and making it possible to communicate and interact with other people and institutions in Colombia and around the world. Nevertheless, they were not very clear what they were going to do with these new opportunities.

In Kerigma, for example, people hoped that the UIB could help them move ahead with building an "observatory" complete with maps of the local district and a database on supply and demand in the local labour market. In Pepaso they thought of the possibilities that it could offer for exchanging information locally and how useful it would be for systematising their library and strengthening their institutional work. And in the AVP they imagined that the UIB could be used to create a database with information on a wide variety of topics relating to the neighbourhood. But little by little, they came to realise that many of these goals would require agreements with other institutions, political support from social players, more sophisticated computer programs and more resources, time and work.

As it turned out, although at the beginning of the project the organisations had high hopes about all the things they could do with computers and with access to the Internet, their management bodies and many of their members and supporters soon began to lose interest in the UIBs. This may have had to do with internal difficulties and with economic and social pressures on the organisations, resistance and fears in the face of these new devices and technologies, or perhaps it reflected the pace of events that are leading to social disintegration in Colombia. In the end, the units were left in the hands of their coordinators, and while this meant that they enjoyed a great degree of autonomy in decision making, it tended to distance them from the mainstream workings of the organisations. The coordinators in several cases began to feel the lack of institutional support in undertaking activities and in positioning the units within their communities. In recent months, having gone through the first steps of training and having gained some experience and understanding about how telecentres work, the organisations have been giving further thought and deliberation to devising feasible and well-articulated proposals for achieving their goals and objectives with respect to the UIBs. Little by

little they have been discovering what these units can do, and what they cannot do, as part of their social and institutional activities.

Yet this recent soul-searching has revealed a certain amount of confusion in their approach to the UIBs. On one hand, they are seen as public places of access to technology that by themselves can help to improve living conditions within their communities. And on the other hand, they are seen as places that must be integrated into the overall activities of their organisations and help to achieve goals in the areas of social, political, cultural or communications work in which they are engaged. It is not that these perceptions are incompatible or contrary to each other, or that one is better than the other, or that they cannot be combined. What it means is that there is a lack of clarity about the limitations and possibilities of different approaches to these units. The fact is that every approach to these units implies different objectives, technical frameworks, working methodologies and indicators for mapping out the route that social projects are going to take, and the ground they are going to occupy.

Learning to use new information and communication technologies.

All the coordinating teams have gone through a process of training that is still underway, thanks to the guidance and assistance of the project coordinator. She has been making regular visits of a day to a week, as much to clear up doubts and to demonstrate the new possibilities of the programming tools and equipment as to monitor the mutually agreed commitments and goals of the project.

Several people who received training have in fact not yet joined the unit teams, because they were obliged to find better-paid employment. The coordination budget for the UIBs was not enough to ensure proper working conditions for the people running them. This was one of the major difficulties encountered in pursuing the project. If people are to stay at the task and maintain their motivation and interest, they must not only have a commitment and social and political convictions, but they must also be rewarded with remuneration for their effort and work. This is even more true when we are dealing with organisations that are fighting for changes that will bring about greater equity and social justice.

The personal training and knowledge that the coordinators have acquired can be seen as one of the most important achievements of the project to date. Although there have been some internal confrontations and disputes, and most of them have faced difficulties, this training has opened up new possibilities for personal development and the growth of self-esteem. At the same time, the training process has given them a better positioning within their organisations [4].

The coordination teams have also praised the attention, understanding and availability of the project coordinator in helping with the training process. This process has required great care and personal attention, and has had to be adapted to the learning pace and skills of the people involved. Differences with respect to their knowledge and understanding of computers and computer programs as well as other issues of an administrative nature meant that the nature and quantity of training also had to be differentiated and adapted as work proceeded.

It must be recognised that the training process has been slow and difficult, primarily for two reasons. In the first place, because of cultural resistance and fears about trying to

use the new equipment and technologies. In most cases the coordinators were working with a computer for the first time in their lives, or they were only beginning to feel comfortable with them on their own. It is not that they did not understand computers or that they had never seen one before, but some of them had only learned to handle a few fairly mechanical programs and for others this was the first time that they had ever booted up by themselves.

One of the subtle manifestations of the power relationships that exist in Colombia is that the use of certain kinds of equipment, apparatus and tools has been restricted to certain people, groups, communities and institutions. For this reason many people are fearful and excessively cautious, and suffer feelings of inferiority when it comes to trying to make use of this equipment. Many people have a prejudice against new equipment and new technologies because they are too expensive, sophisticated, delicate and difficult to handle. Moreover, they believe, only people with a certain degree of background and knowledge can work with them.

We also found difficulties in moving from the logic of perceiving the world based on oral tradition and experience and the physical proximity of objects, places and persons, to a logic in which the world is converted into texts, files and windows that are closer to the idea of virtual reality.

The insecurities and fears of the coordinators of these units with respect to using the computers and programs meant that they tended to discourage use of the services offered by the UIB. There was a tendency to restrict use and limit services, for fear that they would be inundated with a flood of people needing guidance and asking questions that they might not be able to answer.

In the second place, we must say that there were also some shortcomings and limitations in the methodologies and instruments used in the training processes. These methodologies, and the tools and teaching inputs, should perhaps have included perspectives that went beyond technical training and matters related to the use of new technologies themselves. As part of the training process needed to establish the telecentres, it may be necessary to consider some basic tools for planning and organising work, management, promotion, marketing and information, public relations and other matters that can be key to the process of introducing new users to new technologies. It would also be useful to have methodologies that would help people to develop an independent capacity to build their own knowledge base and resolve their own problems, without becoming so dependent on external agents.

Internal training

The processes of internal training and orientation have not really got off the ground. Until now, the focus has been on basic learning and instruction that has not gone beyond the immediate or circumstantial. Only recently has thought been given to systematic and programmed proposals to stimulate and train people from the organisations. The experience of these first months has shown that if we want to promote greater use of these units by their communities, we will have to begin with the people who are closest to them - we must begin with their own organisations. In the case of Kerigma, they have explored other ways of conducting training activities, both internal and external. They have experimented with special activities for adults and children and with games and more participatory approaches to building knowledge

collectively. They have also looked for ways to integrate some of the information collected in the unit in order to inspire discussion and group work on other activities and issues that the organisations are involved in.

Evaluation

The UIBs have been operating on a half-day basis, in the afternoons or in the mornings, and only on week days. Until now, the most frequent users of their services have been students at the secondary school level, as has been the case apparently with most of the telecentres in Latin America and Caribbean [5]. Although there are no records on the number of people visiting these telecentres, we estimate that they are used every day by between 3 and 12 people, depending on the time of year, since during school vacation time the number of users drops significantly.

Students make use of the units' services primarily for their school tasks, homework or university papers, but they also visit the Web pages of popular performers or television programs and series.

It must be recalled that these children and young people come from low income families with other, more pressing needs, and the economic limitations on access to telecentres are quite high. For these people, the Internet is not regarded as a permanent or regular source of access to information of knowledge.

On the other hand it should be noted that, despite the technical and technological possibilities offered by these units, the services that are most in demand in all the UIBs are word processing and printing.

To date, the UIBs have no routine visitors either from within the organisation or from outside. It is only the unit coordinators who make regular use of email and the Internet (email more than Internet). But of course, the regularity of use depends to a large extent on the personal initiative or the working or professional interests of each user.

In Kerigma some cultural organisations come in regularly to use the services of the unit. Nevertheless, for them as well, the main interest has been in the word processor and the printer, for producing programs of their activities and information brochures about their institutions. Several of these organisations have no headquarters of their own, and they find the UIB very useful as a place for writing their letters and handling their correspondence, preparing projects or producing information and publicity materials.

The UIBs have held launchings and presentations of their services in their neighbourhoods and yet there are still few people from other organisations or from the community at large who make use of their services. The unit coordinators recognise that one of the overriding problems is the lack of information and promotion about the centres within their communities.

In recent months the coordinators have begun to examine this problem more systematically and to approach people with a potential interest in their services. They have put together information packages and different kinds of promotional materials to stimulate use of the units, and they are using many ways of publicising them in every area (on buses, on local TV and community channels or by means of fliers, brochures and folders about their services). Another task that the UIBs have set themselves for the

coming months is to identify the interests of various sectors of the community more clearly, so as to produce differentiated and targeted packages and proposals for information and Internet access that will appeal to different groups.

Within the organisations the presence of the UIBs has helped to strengthen their relations and communications with other people and networks. In some cases they have made it possible for groups and networks to function by email, and so they can keep contact and exchange documents without running up large expenses. Some of these networks that used to hold more frequent face-to-face meetings and exchanges in the past have had to seek other means of conducting joint activities and supporting their work, through bulletins, journals and festivals, and for them email and the Internet have become very useful.

Through their own Web pages (Kerigma: Web site: <http://uib-kerigma.colnodo.apc.org> , Pepaso: Web site: <http://uib-pepaso.colnodo.apc.org> and AVP: Web site: <http://uib-favp.colnodo.apc.org>), the three organisations have in different ways produced and posted information on their work, on the communities in which they work, on the services they offer or on the teams coordinating the UIBs. The information varies greatly in quality and quantity, depending on the areas, the interests and the management capacity of each of the organisations.

It would appear that the information posted on the Web pages has not done much to develop relationships with people in other organisations within the country or round world, since such relationships remain few and sporadic. Nevertheless, it has allowed them to position themselves in dialogue with certain governmental and civil society agencies at the local or district level. In any case, it is too early to speak of relationships that have been enabled by the information posted on the Internet, since the institutional pages have only recently been set up

For producing information and deciding what to post on their web pages, the organisations have had to develop processes both for retrieving and processing information and for discussing and updating their organisational purposes and interests. For the three organisations in question, these processes of retrieving, processing and systematising data have been converted indirectly into a way of reconstructing their history or at least some portions of it.

The three organisations have retrieved work and products produced in the past but they have had to undertake the task of seeking the best way to present them in a quick and accessible form suitable for a public access forum such as the Internet offers. On their pages can be found information such as a cultural map of one of the zones, matters relating to citizen participation in the neighbourhood, and summaries and presentations about grassroots organisations themselves.

On the other hand, there is very little information that the grassroots organisations obtain through the Internet and by email. Most of what they receive through email is related to urgent matters involving human rights, social support and information on events that, with luck, end up being pinned to some institutional notice board.

Future plans

For now, Kerigma, Pepaso and AVP, with the support of Colnodo, are thinking and planning for ways to maintain and strengthen these experiments in the future. Although money for the first phase has already run out, they are working to clarify and reorganise the UIBs. Each one in its own way is trying to explore paths for moving ahead towards making these projects self-sustaining. They have in fact begun to conceive them as "social enterprises", and depending on their experience and outlook they feel that they should have good prospects of surviving and of generating both a social and an economic return. Nevertheless, experience has shown them that there is still a need for external economic assistance, over a period of time that will vary between two and three years. By that time they think that they will have UIBs that are clearly defined, well equipped and positioned locally to offer useful services to their communities.

In Kerigma, they are seeking a way to develop a proposal focusing on a "cultural school" project that is to be built on the basis of that institution's accumulated experience in training. In Pepaso, the executive board of the founding partners has decided to strengthen the unit by providing regular support to the people responsible for running it. A draft for a Neighbourhood Communication Network has also been prepared and will be presented to local institutions as part of the process of citizen planning. Moreover, they are looking for ways to integrate the unit into the Conciliation Centre that will soon begin operating within their organisation. For its part, the AVP insists on the need to strike local agreements and contracts to gather and make use of information produced within the area.

For now, there are repeated expressions of the need to endow the units with more equipment so as to ensure a minimal level of revenues that will cover their operating costs. Nevertheless, this need to expand the units in terms of equipment and services once again tends to remove them from the basic rationale for their existence. That *raison d'être* is still not clear or explicit. There are plans, there are ideas and good intentions. Nevertheless, they still do not appear to have viable objectives and goals that can be effectively monitored and for which their social impact can be evaluated in qualitative and quantitative terms.

On the other hand, we must take into account the precarious social and economic situation of the neighbourhoods in which these units are located. These circumstances place severe constraints both on the possibilities for expanding and strengthening the UIBs and on the opportunities for access and use by the community. The frequent communication breakdowns caused by the poor quality of telephone lines and the constant power blackouts (which will not be overcome for many years yet) are a real impediment to their use. A further obstacle is the difficult social and economic conditions of the potential users. These factors should induce some serious thinking about the need to change and adapt or seek alternatives so that these projects can become viable and can be really useful to the communities and localities in which they are located.

The group of coordinators for the units feel that efforts should in future be targeted at youth and children, who besides being their major users are those who have the greatest disposition, ability and capacity to handle the equipment and the tools for these new technologies. In practice, they have shown that they are also the people who have the greatest need for the units, because to a large extent their prospects for work, study or

training depend directly or indirectly on their know-how and skills in the use and management of new information and communication technologies. At the same time, the coordinators have also been able to confirm the difficulties facing people and organisations in their localities in gaining access to these technologies. There are schools that have had to wait a couple of years while they raised the money to buy a computer. The question that remains very much in the air is how and when the children and youth of the area are going to enjoy this possibility.

An overview of the UIBs reveals them to be projects that are ahead of their time, and that have been able to grow in the face of very adverse conditions - the fact that they have survived at all seems almost a contradiction of logic. Nevertheless, there they are, and they are likely to grow and prosper, because with a good dose of stubbornness and creativity, and with the great capacity for adaptation of the people involved in this project, they should be able to continue surmounting the obstacles that appear in their path

The telecentres are still a work in progress. But that is no reason to overlook the meaning and usefulness that they could have for many people and organisations in terms of the contribution they can make to building a society that is more just and democratic. For this, it is important to explore and try out various possibilities, and to take responsible advantage of the impacts that they can have on the life of individuals and communities. Similarly, it is important to begin to think about more modest proposals with pretensions that are more in keeping with the context (historical, cultural, political and economic) in which they operate. After all, it is not only organisations and individuals from low-income communities that have been astonished by their presence.

Summary

The achievements, outstanding problems and lessons presented below result both from the notes and perceptions of people involved in the project and from the impressions and thoughts of the author. All the lessons derived from this collective process of evaluation are important in this common effort to strengthen and rebuild the UIBs so that they can contribute to strengthening grassroots organisations and improving the lot of the people of Bogota who are culturally, politically and economically deprived.

Achievements

The project has been able to:

- Establish and maintain UIBs in peripheral areas of the city. Develop a constructive and respectful relationship between NGOs and grassroots organizations.
- Contribute to relations with local institutions and to the internal communications of organisations and their institutional strengthening.
- Provide training to allow the units' teams to master the use of computers and programs. Although the training process was difficult, it gave its recipients greater skills and self-esteem and helped them position themselves proactively within their organisations.
- Retrieve and organise information from their organisations for posting on the Internet.
- Provide a permanent opportunity for grassroots organisations to have access to Internet services and email.

- Prepare Web sites for each of the institutions.
- Enable relationships with other persons and institutions in the zone.

Outstanding problems

- Resistance and prejudices of a cultural nature against the use of new equipment and new technologies.
- Under-utilisation of units by individuals and organisations in the community.
- Technical problems related to the poor quality of telephone lines and constant interruptions in electric power.
- Congestion in the Internet server. In addition to the technical difficulties, there were problems in connecting to the Colnodo server.
- A lack of articulation between the project units and the general activities of the grassroots organisations.
- Budget resources were inadequate to provide an attractive salary to unit coordinators.
- Lack of mechanisms and strategies and inadequate effort to promote and publicise the units.

Lessons learned

As pilot experiments that can serve as a point of reference for other places, other groups and other times, it is important to think about the conditions needed for these telecentres to be self-sustaining and viable, both from a technological viewpoint (telephone lines, electricity supply, servers) and from the cultural perspective (social and historical characteristics, pressing needs, cultural outlook, space and timing, levels of education and literacy), economic (income levels and ability to pay on the part of individuals and community organisations), and political (participatory mechanisms, political networking and interaction, power relationships). Addressing these factors is essential to the survival of the telecentres, and to ensuring that they can have a positive impact.

Experience should be examined to determine what can be done through these units and what cannot be done:

- The need to undertake clearly defined projects for telecentres that will fit into the broader objectives of the organisation.
- The need to define the characteristics and profiles of the telecentres, either as places for public access to new technologies or as places devoted to achieving the social, cultural, political and educational objectives of the organisations themselves.
- The need to think about the congruence of social and technological objectives so as ensure greater clarity about the impacts, dimensions, challenges, methodologies and indicators from these experiments.
- The need to seek ways to ensure greater autonomy in designing and undertaking projects of this type by grassroots organisations.
- The need for cooperative relationships with other organisations and institutions (including NGOs and international cooperation agencies), from a perspective that will strengthen the autonomy of the grassroots organisations.
- Exploring new proposals for training and capacity building for internal and external users. As well, seeking various uses for the information carried over the Internet and by email.
- The need to establish more clearly the priority groups to be targeted by this work. Similarly, the need to introduce information and promotional packages specifically designed for groups and individuals in each zone.

- Exploring other ways of performing community work.
- Recognising the ability and disposition of youth and children to use the equipment and take advantage of ICT.

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Footnotes

1 This paper is the result of a review of documents prepared for the presentation and follow-up of the project on Neighbourhood Information Units, a literature review on Telecentres and a series of conversations and semi-structured interviews that were conducted between July and August of this year with people in Colnado, with the project coordinator, with the directors of the grassroots organisations that are hosting the UIBs, and with their teams. With these tools we prepared an overview and analysis of the results achieved, the outstanding problems and the lessons learned, in light of the objectives proposed for this project.

2 Colnodo is working in the area of telematics for democratising access to new communications technologies, and Fedevivienda is active in the housing area, where it strives to promote the right to a decent home and to strengthen interaction and dialogue between grassroots organisations and government agencies (local, district and national) and other international cooperation organisations.

3 As noted in a preliminary evaluation report by Maria E. Quintero, an external consultant to the UIB project.

4 As noted by Maria E. Quintero in her report.

5 This is clear from the results of a study conducted by the International Development Research Centre on 23 telecentres in Latin America and the Caribbean, between February and April 1999.

Appendix 2

Telecentre Evaluation and Research: a global perspective

R. GÓMEZ , P. HUNT , E. LAMOUREUX

International Development Research Centre (IDRC), Canada, September 1999

Telecentres are now the focus of much attention in international development discourse. Hailed as the solution to development problems by providing desperately needed access to information and communication technologies (ICTs), telecentres are springing up in Africa, Latin America and Asia. This paper is exploratory in nature, examining the notion of telecentres under a critical light and the diversity of experiences emerging. It calls attention to the need for evaluation of telecentre impact on communities, while examining some of the preliminary assessment efforts underway in Africa, Asia, and Latin America. Finally, avenues for new research are suggested in order to foster greater understanding of the role of ICTs in international "development".

The role of ICTs in development

The effect of the application of information and communication technologies on development efforts is far from clear, according to the United Nations Commission on Science and Technology for Development (UNCSTD), which recently spent three years investigating the benefits and risks of ICTs. The Commission found that "... there are many instances where the use of ICTs is bringing widespread social and economic benefits. However, there are as many instances where ICTs are making no difference to the lives of people in developing countries or are even having harmful effects" (Mansell and Wehn, 1998, 1). Furthermore, emerging studies show that many of the claims being made about the potential of ICTs for development are not supported, and point to possible counter-productive effects (Gómez, 1998; Heeks, 1999; Wilson, 1999).

While it is generally agreed that there exists potential for the use of ICTs to support social development, a major stumbling block - common to both developed and developing countries - is how to assess the impact of ICT applications. A variety of factors account for this problem, including the sheer complexity of the task of measuring the impact of information on development (Stone and Menou, 1994), and "the lack of appropriate indicators of impact, combined with the absence of the financial resources in some developing countries to collect the relevant data" (Mansell and Wehn, 1998, 14). Furthermore, UNCSTD has identified "... a growing literature on performance indicators that seeks to assess the impact of ICTs from the perspective of specific user communities rather than attempting to quantify the overall impact of investment in ICTs on the economy" (emphasis added) (ibid., 15). Until relevant methodologies and adequate tools are developed to effectively assess the social impact of the application of ICTs for sustainable development from the user's perspective, efforts to demonstrate how people are empowered by knowledge will lack credibility.

Given these considerations, the broad issues identified by UNCSTD as ICT opportunities for developing countries, including new types of learning and education, a 'wired' civil society, new forms of commerce and trade (Credé and Mansell, 1998), among others, all provide hints of tremendous potential. However, the discourse

surrounding the introduction and use of ICTs often accepts uncritically the euphoric claims that they will finally help to solve persistent development problems, and ultimately bring about a brave new world replete with electronic commerce and online democracy. The promise and power of the "Information Age" are most often and eloquently articulated by proponents such as U.S. Vice President Al Gore: "... we have promoted universal service to basic telecommunication services, because the ability to pick up a phone or hook up a computer and have instant access to your village, your nation and your world is one of the most liberating and empowering forces in human history, and it should be available to all people" (ITU News, 1998, 4).

This sort of rhetoric suggests 'technological determinism' (i.e. the inevitability of technological influence on society, rather than the reverse). It is related to an implicit threat to "get wired, or else" based on the conclusion that "Although the costs of using ICTs to build national information infrastructures which can contribute to innovative 'knowledge societies' are high, the costs of not doing so are likely to be much higher" (Mansell & Wehn, 1998, 7).

Critics of this perspective approach the issue from broad historical and cultural perspectives, exploring the extent to which the trend to 'wire' developing countries is simply the latest iteration of neo-modernization theory (Escobar, 1995; Sachs, 1992; Jackson, 1999; Heeks, 1999; Jackson and Mosco, 1999). At issue is not only the appropriateness of ICT application in the development context, and the effect on the political economy of specific cultures. There is also a general lack of recognition of the "development opportunity costs" (i.e. attention, money, and other critical factors that are not applied to secure and develop other resources, such as water, food, land, shelter, skills, other types of media and communication, indigenous knowledge, and ultimately power) of investments in ICTs (Heeks, 1999, 16). Critical perspectives of dominant "development" paradigms are informed by the fact that "the modern world, including the modernized Third World, is built on the suffering and brutalization of millions" (Ashis Nandy, quoted in Escobar, 1995, 213).

These considerations are useful in understanding and placing in context national and international policy pertaining to ICTs, as well to situate the work of telecentre practitioners and researchers within a broad, global perspective. They also serve to bring sober second thought to bare on the assumption that the global "Information Revolution" will be "positive and progressive" (Wilson, 1999, 1). For instance, an historical examination of the introduction and use of earlier technologies such as the telegraph and train demonstrate their roles in colonizing and marginalizing certain societies in a rapidly changing global economy (See Peter Benjamin & Mona Dahms, "Socialise the modern of production - The role of telecentres in development ", in this volume.). Does nascent telecentre activity, in the context of globalization, represent the latest wave of colonization based on technology?

Telecentres under the spotlight

In the international development sphere, the promise of information and communication technology is often promoted as a solution to broad, problematic issues such as the lack of universal access to telecommunication services for a majority of the world's people. In practice, this promise has increasingly taken the form of projects to build public-

access facilities to provide electronic communication services, especially in marginalized or remote areas where commercial development of ICTs is not prevalent.

IDRC's experience in information and communication is informed by research it has supported in the following areas: impact of information on development (Menou, 1993; McConnell, 1995); evaluations of initiatives which involve ICTs (Graham, 1997; African Information Society Initiative, 1999; Menou, 1999); and development of evaluation and assessment methodology (Lanfranco, 1997; Menou, 1993, see especially Chapter 6: Preliminary Framework for Impact Assessment).

This body of work constitutes an important component of the Centre's information policy research, with "... potentially profound implications for increasing awareness and understanding of the role, value, and impact of information on development (and decision-making in general) " (Valentin, 1996, 101).

There are a great variety of telecentre experiences around the world, many of them drawing on earlier efforts to establish 'telecottages' and telecentres in Europe and North America. While these diverse initiatives have been given many names (Cisler, 1998) - including telecentres, telecottages, community technology centers, community communication shops, village knowledge centres, networked learning centers, multipurpose community telecentres, digital clubhouses, cabinas públicas, infocentros, telecentros, espaces numérisés, telestugen, community access centres, etc. - the word 'telecentre' serves as a generic term to encompass this array of experiences.

While there is no single definition of telecentres to satisfy everyone, a common characteristic is a physical space that provides public access to ICTs for educational, personal, social, and economic development. Based on the premise that not everyone in the world has access to a telephone, much less a computer, fax service, Internet connection, or relevant information resources, telecentres are designed to provide a combination of ICT services. These range from basic e-mail to full Internet/World Wide Web connectivity, with additional services that may include fax and word processing, to specialized information retrieval or applications such as tele-medicine or distance education.

A basic typology of telecentre models - "Basic", "Franchise", "Civic", "Cybercafe", and "Phone Shop" -, drawing on examples from Africa, Asia, and Latin America, was developed in an earlier version of this paper, in order to begin to understand the range of experiences currently being developed under the generic telecentre label (Gomez, Hunt, Lamoureux, 1999). As that paper was taking shape during the first few months of 1999, a parallel project saw the construction and initial seeding of the IDRC Telecentre Research Web site. This online resource centre is intended as a useful gateway to telecentre projects, tools, research, discussion, and knowledge, focusing in particular on IDRC-related experience in this field.

Telecentres are being introduced as a development tool to bridge knowledge, social and economic gaps, frequently characterized as a widening chasm between the 'information rich' and 'information poor'. To date, there is a growing, yet still limited, body of knowledge on how to plan and implement telecentres (Fuchs, 1998a; International Institute for Communication and Development, 1999), as well as documented case studies (Fuchs, 1998b). However, since the idea of utilizing telecentres to support

development efforts represents a novel concept, only now is significant consideration being given to the difficulty of evaluating their impact.

Learning from experience: Africa

Evaluating the social impact of telecentre experiences in the communities they are intended to serve is no easy task. To date, more resources have been dedicated to setting up pilot telecentres than to understanding their uses and impact on the communities they purport to serve, while few efforts are specifically addressing the problem of evaluation. Perhaps it is more appropriate, to turn the relationship between technology and people upside down, to ask this question: What impacts are communities having on the identification, design, and use of ICTs?

Early tentative steps in the field of telecentre implementation and evaluation are now underway. IDRC's ACACIA program initiative seeks to empower sub-Saharan African communities with the ability to apply information and communication technologies to their own social and economic development. Telecentre projects have been introduced in various African countries. In addition to describing the diverse telecentre experiences being supported by ACACIA in Africa, the ACACIA Telecentre Evaluation Framework (Whyte, 1998) outlines basic guidelines to evaluate this array of experiences. The framework is aimed at addressing fundamental questions about the role of ICTs as catalysts for community development, as well as more specific examination and identification on the ways in which community participation or different management models constitute success factors in the operation of telecentres.

A recent ACACIA publication (see: Anne Whyte's " Understanding the Role of Community Telecentres in Development - A Proposed Approach to Evaluation " in this volume.) provides a detailed approach to telecentre evaluation, including development of a research plan, formulation of indicators, and methods for data collection. This study is based on a larger report, Acacia Research Guidelines for Assessing Community Telecentres (Whyte, 1999), to be published by IDRC this year.

Linked to this work is the collective effort to devise a framework for the evaluation of Multipurpose Community Telecentre (MCT) pilot projects by a partnership of the International Telecommunications Union's (ITU), the United Nations Educational, Scientific, and Cultural Organization (UNESCO), and the International Development Research Centre (IDRC) (Ernberg, 1998b). This evaluation framework is being implemented and enriched in collaboration with the PACT Institute, through the study of telecentres in Mali, Uganda, and Mozambique.

The goal is to design a common framework for the evaluation of the MCT telecentre experience, including the formulation of indicators and tools (visit: <http://www.idrc.ca/pan/evaluation.html#TOOLS> for an example) appropriate to the evaluation of impact. Taking the evaluation beyond the collection and analysis of data and turning it into a community empowerment tool which serves as an example of Participatory Monitoring and Evaluation (PM&E - see, for example, Institute of Development Studies (1998, November). "Participatory Monitoring and Evaluation: learning from change". Brighton, University of Sussex. Available: <http://www.ids.ac.uk/ids/publicat/briefs/brief12.html>), PACT is in the process of establishing a results-oriented learning system for MCT operations as an integral part of

the evaluation process (PACT Institute, 1998a - see also George Scharffenberger's "Telecentre Evaluation Methods and Instruments: What works and why?", in this volume.).

In Timbuktu, Mali, a combination of baseline data collection techniques have been employed (e.g. survey questionnaires, interviews, and focus groups) to provide "... a rich snapshot of Timbuktu's current information and communications profile" (PACT Institute, 1999a, ii). Findings include: Telephone use is greater than expected; Radio, television, and newspapers are the most prominent media used; Low satisfaction with the availability, cost, and reliability of basic information; Information priorities include education, professional development, religion, health, news, and sports; External information is important, but so is local self-expression (i.e. telling Timbuktu's story); Lack of concern over external information's effect on local culture; Differences in communication use, according to gender, income, education/literacy, and age; Community enthusiasm for the MCT; expectation of reduced communications cost, better access to professional information, opportunities for community expression, and links to external partners and markets; Community suggestions for MCT success: low-priced, quality services; a welcoming staff; training and support for users; a well-managed Centre. (ibid., ii-iii)

A range of challenges face this project as it becomes operational. The researchers identify in particular "The MCT's broad economic development, educational, health and equity objectives on the one hand, and its sustainability and replicability imperative on the other, create a difficult marriage" (iii). Other researchers concur with the need to carefully handle these diverse telecentre "experiments" and suggest less emphasis on immediate profitability and more focus on the crucial role of evaluation and monitoring, especially when the telecentre is specifically designed to be accountable to the community it serves (Peter Benjamin & Mona Dahms, "Socialise the modem of production - The role of telecentres in development", in this volume).

A similar PACT evaluation exercise is underway in Nakaseke, Uganda and the preliminary objective of conducting a baseline survey of the community has been accomplished (PACT Institute, 1999b). An interesting component is the emphasis on participatory techniques, as exemplified by the training of "core users" and telecentre staff to collect research data on an ongoing basis for evaluation purposes. The result is the development of a three-week data collection methodology and training process which "... incorporates a powerful set of tools to better understand the informational needs of telecentre communities" (ibid., ii). Of interest as well is the emphasis placed on the training of community youth "to serve as 'informational links'" (xv).

Learning from experience: Asia

IDRC's PAN Asia Networking program draws on considerable experience collaborating with local partners on ICT research and development. Infrastructure and content provision are two fundamental program components, with Internet Service Provider (ISP) partnerships and information servers in place in several Asian countries.

Telecentre development and research is a relatively new endeavour. Currently, IDRC is funding a project called Internet Access by Remote Communities in Sarawak: The Smart School as a Demonstrator Application. As in Africa, baseline studies are being

used to "... establish yardsticks for key indicators of the community-related variables which we expect to influence. These include; community socio-economic factors, awareness of information technology among the community and among teachers and pupils, and cultural factors relating to the world-view of the community as well as its relationship with information" (Harris, 1999 - For a more recent report, see Roger Harris's " Evaluating Telecentres within National Policies for ICTs in Developing Countries ", in this volume.)".

Aside from providing an interesting test of the telecentre model in a particular Asian setting, the Sarawak project will shed light on the role of ICTs in national and international development policy. It is also of interest in exploring the political and social implications of Malaysia's Vision 2020 program, and the influence of the Silicon Valley (California) example on Southern countries (Jackson and Mosco, 1999).

In Southern India, a dynamic, IDRC-supported project is underway to design an ICT-based model to promote sustainable rural development under the guidance of the M.S. Swaminathan Research Foundation. Extensive community consultation has resulted in the establishment of "village knowledge centres" (For more details, see Venkataraman Balaji's " Knowledge System for Sustainable Food Security " in this volume.), which focus on content creation and information dissemination (including databases in the Tamil language) pertaining to health, local demographics, transportation, government programs, crop and agricultural input prices, and pest management.

A host of other telecentre projects are now unfolding in Asia, including IDRC-supported activity in the Philippines (See Merlita Opena's " Multipurpose Community Telecenters in Selected Philippine Barangays ", in this volume.) and Mongolia (see Narangerel Dandar " Establishing a Public Internet Centre in Rural Areas of Mongolia ", in this volume.).

Learning from experience: Latin America and the Caribbean

IDRC's PAN Global Networking initiative has recently launched a research program to investigate telecentre activities in Latin America and the Caribbean (LAC). A preliminary inventory shows that certain LAC countries, such as Peru and Mexico, have made some progress in establishing telecentre service. Networks of telecentres have been created (or are underway) in Peru (190 telecentres), Mexico (23 telecentres created in 1995, but only 5 operating now; others are in the planning stages), Paraguay (8 telecentres), and El Salvador (some 100 Infocentros , to be created based on the Conectándonos al Futuro project). Apart from these networks, a range of diverse telecentre activity is underway in several countries.

Latin America Telecentre Survey

In February of 1999, IDRC conducted a survey of a group of telecentre operators to collect basic data on current experiences of public access to ICTs in Latin America. The results confirmed that telecentre activity in the region is quite new and in an experimental phase. Although the wide range of telecentres - which includes all typology types, from cybercafes and basic telecentres to franchise models - examined in the study and the relatively small number of respondents (23) make it difficult to draw firm conclusions from the results, certain tendencies can be observed.

Funding - Latin American telecentre pioneers received very little funding from government and international sources. Indeed, the region's first telecentres were funded by the local private sector or by communities and local NGOs. Users - Students appear to be the main users of telecentres, as 82.6% of respondents indicated that students made use of their facilities. Some of the more recent telecentre projects target marginalized populations and are located in remote and poor areas. These generally offer basic services, often receive international funding and face financial sustainability challenges.

Obstacles - Financial and technical difficulties appear to be the most significant problems facing telecentres. In big cities, telecentres tend to rely on revenue from the sale of computer-related services. In more isolated areas, other funding solutions are found, such as advertising, private sector partnerships, craft sales, payment for Web site services, and production and sale of videos. Technical problems often result from deficiencies in telephone networks. Networking - 30% of respondents reported no contact with other telecentres. The ten who did have contact were either members of a network of telecentres under a franchise model, or funded by governments or international organizations that supported other telecentres either in the region or internationally.

While the novelty and diversity of telecentre experience in the region may complicate study and evaluation of impact, it also reveals a certain vitality. The respondents probably represent a small proportion of LAC projects involving public access to ICTs. Other experiences - which also need to be considered for research - may not identify their operations as telecentres or may have a vision of the role of ICTs in the development process that goes beyond the concept of a telecentre.

Meanwhile, no systematic evaluation of social impact related to telecentre use has been undertaken in LAC to date. This need is now being addressed with the imminent creation of a Latin American Telecentre Research Network, coordinated by regional participants with the support of IDRC. Over the past several months, an extensive online consultation involving key players in LAC telecentres was conducted by Karin Delgadillo of ChasquiNet (see: Karin Delgadillo and Raúl Borja, " Learning Lessons from Telecentres in Latin America and the Caribbean "). The task was to formulate a strategy to build a telecentre support, research and evaluation network over the next few years.

The Peruvian Scientific Network (Red Científica Peruana - RCP) is one of the members of this new network, given RCP's experience as a founder of the largest network of telecentres in the world. RCP has developed a comprehensive Universal Access Model (see Yuri Herrera Burstein's " Universal Access Model " in this volume.) based on its first the *Cabina Pública* back in 1996, an approach which challenges the North American conception of a computer per household equipped with Internet access. Instead, RCP offers an alternative franchise model of telecentres based on community access and needs, operating according to market principles to achieve sustainability.

In contrast, the pace of telecentre development in countries such as Colombia (See Luis F. Baron's " Experiments in community access to new communication and information technologies in Bogota ", included in this volume.) and Ecuador is more measured,

where the influence of societal upheaval and particular social movements are especially significant. While preliminary, yet important, evaluation efforts have now taken place, much remains to be done in that regard.

Alternative communication in Latin American

Any initiative regarding communication research in Latin America must build on the long and rich history of community media (e.g. radio) found in the region. For decades, community media activists have been working toward social objectives which telecentre practitioners are now focusing on. Given the general lack of experience in the field of telecentres, the contributions of other community media researchers and activists can enrich this work, especially in the areas of evaluation and creation of relevant local content.

In addition, the border dividing telecentres and community media is porous. Excluding other forms of community media from a regional research effort on telecentres would overlook the fact that the Internet and related 'new' technologies are complements to existing media already active in the region. The task now is to determine the extent to which this technology has a positive role to play in addressing endemic social problems.

IDRC is now funding research to experiment with Internet use to help strengthen community radio stations in Latin America and the Caribbean. The RadioNet project, for instance, headed up by the World Association of Community Radio Broadcasters (AMARC), focuses on training and the exchange of information among community radio stations in LAC. Some thirty regional stations are targeted for Internet access over the next two years. Related research is also underway, concerning the comparative evaluation of telecentres and community radio in Latin America (See Emmanuelle Lamoureux's "RadioNet: Community Radio, Telecentres and Local Development", in this volume.). The idea is to gain a better understanding of the phenomenon of converging media on communication processes and social groups.

The history of Latin America illustrates the importance of a wide range of social movements in forging space for alternative political expression. These movements challenge state economic and political models which are seen as responsible for the "reversal of development" underway since the early 1980s in many Latin American countries (Escobar, 1992, 1-2). Social movement strategy includes attempts by marginalized groups to gain social recognition, forge identities, and create political spaces of expression.

The crisis of development in the region, particularly from the late 1960s, is attributable to the failure of the post-World War II development model. This model continues to be based on rapid industrialization, the technological transformation of agriculture, and cultural modernization ("adopting a rational, scientific, and secular approach to social life"), and is characterized by increasing violence and social exclusion (see, for example, the difficult context which community telecentres in Colombia are attempting to operate under, described in Luis F. Baron's "Experiments in community access to new communication and information technologies in Bogota"; included in this volume.) (ibid., 1-4; Sachs, 1992).

One example which hints at the potential inherent in alternative communication is a telecentre project located on the fringes of Mexico City, in community and cultural centres, public libraries, and the office of an indigenous group. The project was designed to produce and provide access to local and national information (e.g. online maps indicating municipal boundaries, and private and communal properties, historical and ethnographic information, forestry regulations, and crop prices), as well as open up communication channels (via e-mail and fax) to government officials and businesses. Of particular interest is the social context surrounding this initiative, as well as follow-up telecentre activity being planned based on what is now understood (See Scott Robinson's " On Estimating Telecentre Demand in Mexican Rural Municipios " in this volume.). This effort comes at a time when millions of poor Mexicans are reeling from a programme of economic liberalization amidst stirrings of political challenge to the oppressive, single party state that has ruled for decades. As explained by the project coordinator, Scott Robinson: ... the Mexican telecenter initiative is only partially about computers and Internet connectivity. Its principal focus is on information policy -- the availability and use of public domain information to strengthen participation in public policy debates, improve municipal administration and resource management, and create new opportunities for learning ... (it) is developing in tandem with a broader movement toward democratic reform. (Robinson, 1999, 1)

A Research Agenda for Telecentres

Despite the euphoria surrounding ICTs and development, as yet there is little understanding of the role of telecentres in social development. Many projects are still in an embryonic stage and interest in their evaluation is preliminary. To compound the situation, we still do not possess solid evaluation tools and comparable results to guide us. These considerations will need to be addressed in due course. Concerted effort is required in a number of areas to conduct in-depth research on: the demand by people for telecentre services; community involvement, participation and use; gender and cultural issues; training needs and materials; marketing and operation; policy, trade and regulatory issues; technological choices and developments; sustainability; the social impact of telecentres, including identification of the conditions "under which ICT contributes to equality or inequality" (Wilson, 1999, 35); the role of ICTs in the "development" process itself.

The context for research on the social impact of information and communication technology is extremely important, as indicated by the recommendations offered by Paul Attewell of the City University of New York: 1.future research should pursue empirical studies of existing technologies in real settings, as distinct from speculative or purely theoretical exercises; 2.care should be taken to include representative organizations/settings, not just cutting-edge or high-tech ones; 3.studies of unintended consequences of IT, such as failures and discontinuance, are important for what they tell us about these technologies and about the process of change more generally. Researchers should be interested in the full range of "impacts" - intended and unintended; 4.projects aimed at developing prototypes should routinely include a performance assessment of evaluation, and the latter should be conducted at arm's length from the former; 5.contextual variables should be studied rigorously ... ; 6.we should reconceptualize what we are doing as social and economic studies of computing and communication technologies rather than technology impact studies, and try to avoid technological determinism. (National Research Council, 1998, 136)

These considerations need to be taken into account when designing telecentre research. The contributions presented in this volume are especially useful in shaping the research context and practice, as they explore and illuminate issues and questions raised by telecentre evaluation. In turn, the participants at this international meeting have advanced the process of fashioning approaches and answers by contributing their knowledge, experience, methodologies, tools, and stories.

Meanwhile, initial results from telecentre evaluation efforts (See, for example, Khumal, 1998, as well as Luis F. Baron's " Experiments in community access to new communication and information technologies in Bogota " -in this volume). may paint a picture that is perhaps not as bright as we are led to believe by the euphoric discourse surrounding ICTs for development. A variety of initiatives now underway, such as the example from Mexico, aim to change the outlook. However, we should not be surprised if the results of future evaluations are not as positive as many people expect. In the meantime, communities in Latin America, Asia, and Africa provide fertile testing grounds to assess the social impact of information and communication technologies.

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