



# RESEARCH

ICT Innovations for  
Poverty Reduction



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## INNOVATION AND RESEARCH SITES:

**Nabanna: Networking Rural Women and Knowledge** (Baduria, North 24 Parganas District, West Bengal, India) uses grassroots processes to build information-sharing networks among low-income, rural women. Networking is done face-to-face and through web- and print-based mechanisms, linking women and their groups from different parts of the municipality. The network has dealt with a range of information topics, with a current in-depth focus on health.

**Youth-Led Digital Opportunities** (Sitakund, Chittagong District, Bangladesh) established a rural ICT centre linked to a grassroots youth development network that works to address root causes of poverty and key areas of social and economic development. It promotes the empowerment of marginalised youth through ICT skills training, access to computer, internet and other multimedia facilities.

**Darjeeling Himalayan Internet Railway** (Darjeeling, West Bengal, India) established four community ICT centres at stations along the Darjeeling Himalayan Railway (DHR). The network aims to offer secure, central and easy computer and internet access to poor people living in communities close to the railway. The centres were closed at the end of March 2004 with the lead partner citing an inability to run the centres on a sustainable basis. Although there are plans to reopen the centres, at the time of publication in July 2004, they were still closed.

**Empowering Resource Poor Women to Use ICT** (Chennai, Kancheepuram and Cuddalore, Tamil Nadu, India) has put computers with internet connectivity into the homes of women's self-help group (SHG) members. The project selected a mix of rural, urban and semi-urban areas in order to look at how women in these different communities can use ICTs in familiar spaces to meet their needs. Particular attention is given to income generating activities and the need for product development and marketing.

**ICT Learning Centre for Women** (Seelampur, New Delhi, India) is an open learning centre for girls and women located at an inner-city Madrasa (Islamic school) in a high-density, low-income area of New Delhi. A range of interactive multimedia content has been developed and used to support vocational and life-skills training and to build awareness of health issues and livelihood opportunities. A website was established in early 2004 to facilitate marketing of products produced by women and girls in the centre.

**Namma Dhvani Local ICT Network** (Budikote, Kolar District, Karnataka, India) combines a radio studio, an audio cable network that delivers radio to local households, and a telecentre with computers and other multimedia tools. It is run by and centred on a network of women's self-help groups (SHG) and linked to a local development resource centre. Daily community radio programming addresses local information and communication needs, drawing on productions by local volunteers as well as a variety of multimedia resources, like websites and CD-ROMs.

**Tansen Community Media Centre** (Tansen, Palpa District, Nepal) works with local youth from poor families and traditionally marginalised caste groups, training them in audio-visual production and computers and internet skills. The centre is made up of a digital production studio and a computer/internet access centre and is linked to a local cable TV network. Youth participants' audio and audio-visual programming are aired on local media.

**Uva Community Multimedia Network** (Uva Province, Sri Lanka) uses a combination of radio and new technologies as a way to facilitate responsive development and governance on a province-wide basis. A series of community multimedia centres, combining FM radio and telecentre facilities, have been established alongside a series of grassroots 'knowledge societies'.

**Jakar Community Multimedia Centre** (Jakar, Bhutan) is part of a remote Bhutan Broadcasting Service production station in Jakar. Local TV and radio production feeds into the national broadcast system, allowing for increased level of content from isolated rural areas. High-speed connectivity offers the local population access to new online services, like e-mail and e-post, and new resources.

## FOREWORD

Promoting the free flow of ideas and maintaining, increasing and spreading knowledge are all central to UNESCO's vision and mandate. They are essential elements of economic development, good governance and democracy. Information and communication technologies are unique tools in our efforts to build equitable information and knowledge societies. Their impact on our world is hard to over-estimate.

UNESCO's programming emphasises an approach to ICT and development that is multimedia and multipurpose. ICT encompasses the full range of information and communication technologies, including radio, television and print media as well as the ever expanding array of computer hardware and software, telecom devices, internet and portable digital media. UNESCO's community multimedia centres and networks combine new and traditional technologies, like radio and internet, in innovative ways, linking global knowledge resources with locally suitable media. Multipurpose community telecentres reinforce the need to use ICT as a development tool that crosscuts sectors like education, science and culture.

To meet the parallel needs of innovation and research in applying ICT for poverty reduction, UNESCO has facilitated a network of ICT initiatives in South Asia. Working with a wide range of partners, a series of grassroots access sites were established in 2003 to test different models for ICT usage by the poor, in particular women and youth. These sites feature a variety of ICT configurations, tools and strategies in different social and geographic contexts. An innovative research methodology using applied ethnographic tools has been developed and applied within each site in order to better understand and document the experiences and impact of these initiatives.

UNESCO's role is to innovate, pilot and document new approaches, to stimulate debate and catalyse change. Our work should inspire exploration and discussion and facilitate the exchange of ideas, experience and skills. This publication is an important contribution to these efforts. It shares the preliminary findings and analysis of the ethnographic action research undertaken in some nine sites in five countries in South Asia. I would like to take this opportunity to acknowledge the contribution of various people in this endeavour. I thank Don Slater and Jo Tacchi, the lead researchers of this programme. I also appreciate the efforts of the project team of UNESCO, New Delhi, under which this network and research were initiated and guided. I particularly wish to thank Wijayananda Jayaweera, the project team leader, Tarja Virtanen, team member and Communication and Information Advisor in Asia-Pacific, Ian Pringle, project coordinator and Savithri Subramanian, research coordinator. I also sincerely thank the teams at all the different sites and the communities who actively and enthusiastically participated in the initiative.

**Prof. Mohsen Tawfik**

UNESCO Representative and Director

UNESCO Cluster Office for South Asia

Asia Pacific Regional Bureau for Communication and Information

## PREFACE

UNESCO has a long history supporting information and communication development in Asia. A considerable emphasis is being placed in the potential of new technologies to positively impact on efforts to reduce poverty. We feel that it is important to critically investigate this potential and using appropriate research methods, to contribute to our collective understanding of how ICTs might be useful tools for the poor.

Information and Communication Technologies for Poverty Reduction was developed under UNESCO's crosscutting theme on the eradication of poverty, especially extreme poverty. From the outset we have looked at poverty as a complex reality, one in which powerlessness and voicelessness have been identified by the poor themselves as being central to their experience.

Our aim has been to combine research with technological and social innovation to develop ICT models that empower people living in poverty, keeping in mind the wide range of factors that contribute to their poverty: marginalisation, oppressive social norms, lack of responsive and accountable governance, et cetera. We believe that the present effort is unique in its combination of rigorous and responsive implementation and the development of an integrated research approach.

As the name clearly suggests ethnographic action research is based on combining two research approaches: ethnography and action research. Ethnography is a research approach that has traditionally been used to understand different cultures through largely qualitative methods such as participant observation and a wide range of interviews. Action research is used to bring about new activities in an intervention through new and better understandings of situations. The research approach therefore simultaneously feeds local project development by encouraging informed reflection as well as a regional comparative analysis of ICT applications for poverty reduction.

The project network is spread across nine locations in South Asia including India, Sri Lanka, Nepal, Bangladesh and Bhutan. The sites present a wide range of demographic, geographic and social situations. The focus is less on technology itself and more on its practical application and usage by poor, in configurations that combine different media, that link technology to social mechanisms and that are suitable, responsive and shaped by specific local needs and circumstances.

The primary concern is with the poor, especially the extremely poor and socially marginalised groups. In this context, poverty is defined not so much by economic parameters and not even necessarily in tangible terms. Poverty here connotes a lack of voice and empowerment. The research has facilitated the identification of these groups in different sites, assessments of their needs and defined - and then redefined through the process of action research - appropriate and responsive strategies and solutions.

When we began this work, we asked ourselves "If technology is the answer, what is the question?" Our investigation has been framed around assessing whether and in what ways and under what circumstances ICTs are a useful tool for poor. It is these questions we have been simultaneously attempting to address and studying through the various pilot projects. As we complete two years of this initiative, the learnings from the research have been many and while it is still early in the overall research process, we share these with you in this publication. As we move further we aim at enhancing the value of ICTs for the poor and poverty reduction strategies through ongoing

innovation, rigorous research and networking to share findings, analysis, experiences and ideas.

The research approach has been developed and the process guided by Don Slater of the London School of Economics and Jo Tacchi of the Queensland University of Technology, in cooperation with the regional project team at UNESCO's Asia Pacific Bureau for Communication and Information in New Delhi, local researchers and project teams across the nine sites and most importantly with the individuals and communities who have joined us in this endeavour. Our thanks to everyone who has worked with us and contributed to this unique effort.

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Director, Division for Communication Development  
UNESCO

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- Namma/Budikote: VOICES; Myrada
- Tamil Nadu: Tamil Nadu University of Veterinary and Animal Sciences
- Uva: Uva Community Radio; Sri Lanka Broadcasting Corporation; Uva Provincial Council
- Jakar: Bhutan Broadcasting Service

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# 1

## INTRODUCTION

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### Information And Communication Technologies And Poverty Reduction

In 2002, UNESCO initiated a programme to innovate and research ICT applications for poverty reduction in nine project sites across South Asia. By comparing these different applications of ICTs, the answers to basic yet fundamental questions are sought: Can ICTs be used to reduce poverty? And if so, how?

In order to address these questions, UNESCO designed the ictPR project to integrate research into all the projects from the beginning, as central to both innovative project development and building a wider understanding of the role of ICTs in poverty reduction. Each project has a full time local researcher involved on a daily basis with the work of the project, combining project development and research. The researchers are trained and supported in ethnographic action research by three research co-ordinators<sup>1</sup>. This support is provided through workshops, on-line tools (a shared website, chat and email), a user's handbook<sup>2</sup> and field visits.

The combination of research and project development in the ictPR project means that we are able to continuously address basic issues of ICT interventions in the very process of implementation:

- In what ways can we combine different media and link them to already established local social networks to improve the situation of the poor?

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<sup>1</sup> Savithri Subramanian in Delhi, India; Jo Tacchi in Brisbane, Australia; and, Don Slater in London, UK.

<sup>2</sup> <http://cirac.qut.edu.au/ictpr/downloads/handbook.pdf>



- In what ways can ICTs be used to strengthen social networks, or develop them where they are lacking?
- In what ways can ICT-based interventions be used to change or challenge social norms that disadvantage marginalised people?
- In what ways can we use ICTs to help build local organising capacity, and to help poor and marginalised people become visible, have a voice and gain access to information and knowledge that can improve their lives and livelihoods?

UNESCO developed the ictPR project in ways that allow explorations of the linked social and technical aspects of the relationship between ICTs and poverty reduction. We have been primarily concerned to understand how ICTs, combinations of ICTs and mixes of ICTs with other means of communication can work within local social networks, social organisations and social processes. Rather than separating out specific 'information resources' in order to assess their 'impacts' on poverty, we have constructed and supported a range of dynamic and innovative media experiences whose relationship to a wide range of community processes we could then explore, in rich detail, and over a long period of time. Indeed the research is ongoing, and the findings reported here will be further developed and expanded as the research continues.

The original ictPR project priorities clearly reflect this linked socio-technical approach to poverty reduction. Through both research and project development, ictPR aims to:

- Build upon shared networks and existing assets of the poor;
- Focus on women and youth as agents of change;
- Combine new and traditional media;
- Integrate social and technological networks;
- Build horizontal linkages and reinforce collaboration at a local level;
- Increase the organising capacity and bargaining power of the poor;
- Support social movements and change in oppressive social norms; and,
- Innovate solutions and new applications of technology.

## **Methodology: The Research Process**

For ictPR, and in this publication, 'ICTs' encompass a full range of information and communication technologies, which include radio, television, the press, physical notice boards, computers and the internet. More than this, the idea of 'communicative ecologies' has been an important factor in ensuring that researchers and other project workers situate their local understandings and uses of ICTs within existing technical and social networks. 'Communicative ecology' refers to the complete range of communication media and information flows in a community. It places ICTs (radio, computers, mobile phones, print media and so on) in the context of all the ways of communicating that are important locally, including face to face interaction. It is recognised that any 'new'



connections and networks (social and technical) that develop as a result of project work and the introduction of individual media technologies will be far more effective if they are somehow interconnected with existing, locally appropriate systems and structures.

Researchers are trained to use ethnographic research methods (including in-depth interviews, participant observation, diaries and surveys) to uncover the structures and experiences of poverty and media use in their locality. Researchers seek to understand how poverty is experienced and managed by their target groups rather than simply to measure it. They look at the complete 'communicative ecology' of their area, investigating the full range of means of communication that are employed and the local social networks through which information and communication flow. This gives them the detailed understandings necessary to monitor how their ICT interventions are working, and consider how they might better address local experiences of poverty. As the research is ongoing, they continue to develop these understandings, see how interventions work or do not work, and adjust project activities accordingly.<sup>3</sup>

Out of the nine project sites, eight of them have been contributing research data to a centralised research website for more than one year.<sup>4</sup> The research has proved important locally for individual project development and at the same time comparison of research across the sites has helped us to learn from each other's experiences. More than this, the process of training all the researchers in the same methodology, and storing and discussing research data in a centralised location has given us the opportunity to compare and contrast research, and develop significant insights into the potential role of ICTs in poverty reduction. These insights are based on data from across the sites which use a range of media mixes, approaches, resources and organisational structures.

This publication presents the first considered comparative analysis of that research data. This analysis process began in earnest in October 2003 when we began to look for overarching themes emerging from the data which could help us to organise the research materials. Through online discussions and a consultation meeting in Delhi (December 2003) we developed these themes in more detail, comparing and contrasting experiences in order to provide insights into some of the ways in which ICTs might be used most effectively for development and poverty reduction.

## Media Mixes: The Local Initiatives

All of the ictPR initiatives combine and link social and technical resources in different ways, often in response to the knowledge and resources available to their organisation and in an attempt to respond to the needs of their target communities. Here we introduce them by exploring the different media mixes they employ.

UNESCO has supplied all nine initiatives with computers, with each group securing internet



<sup>3</sup> See Tacchi, J., Slater, D. and Hearn, G. (2003) *Ethnographic Action Research: A User's Handbook*. New Delhi. UNESCO. <http://cirac.qut.edu.au/ictpr/downloads/handbook.pdf>

<sup>4</sup> Although the Bumthang CMC initiative in Jakar District of Bhutan is part of the network, delays in establishing facilities and challenges in conducting research in a remote area have limited the amount of research data available to date.



access. At the time of writing each local initiative is at least one year old. While some have integrated internet use into their work, others are just beginning this process due to connectivity or other technical challenges. All of the sites were also supplied with digital cameras, multifunction printers (including scanner and basic photocopy facilities) and digital pendrives, and in some cases webcams and microphones. These peripherals often played a very significant role in evolving media use. Other equipment suitable to the technical models was provided by UNESCO on a site by site basis, for example digital video cameras to Tansen and audio equipment to Namma Dhwani.

UNESCO also commissioned eNRICH, a software knowledge management solution (described in more detail in the next chapter), and encouraged all of the sites to work with it. eNRICH enables community groups to build their own gateway to web and other multimedia resources. Customisable and designed to work in local languages for non-experts, it is a relatively simple way to organise and animate information resources, making access easier for local users.

Between them, the initiatives demonstrate a wide range of information and communication technologies including FM and cable radio, cable television, video, computers, the internet, digital photography and print publications. As the idea of 'communicative ecology' implies, each media technology is used in complex information and communication environments, in which they are linked to other media and social networks. In ictPR, computers are linked both to the other media resources available within the projects (radio, video, newsletters, digital photography), and to existing and developing social networks. Researchers have all been alert to the role of other communicative activities such as face to face communication, the consumption of mainstream television, film, radio, and the use of telephones and postal services.

A key finding to date has been that the strongest linkages between social and technical networks have grown over time through gradual, localised and organic developments, and in response to communities of users. This is a *process* of development that is ongoing and that does not appear to operate according to abstract or generalisable connections between the different media, or between media and local social networks. This process of linking technical and social networks can only, it appears, be developed at a local level, as different locations, communities and technologies interact with each other in often unpredictable ways. Nevertheless there are some principles that emerge regarding the kinds of research and project development approaches that can identify, support and sustain these processes.

## Nabanna

A good example of gradual, local and organic development of social and technical linkages is provided by *Nabanna*. The starting point for the Nabanna<sup>5</sup> initiative was not ICTs themselves, but social networks of women. Nabanna brought together a group of women ('information agents') who set up 'information groups' in their immediate locality. The information agents receive computer training, and are participants in running computer centres set up in different parts of the municipality. One of their first activities was to write diaries, sometimes on set topics, which helped both them and the project staff to explore local concepts of information, local knowledges and local information needs. With this approach at its core, the Nabanna initiative experimented with a range of social and media connections. The *Nabanna newsletter*, a print publication, was developed with content from local women as well as information about ICTs and about the centres and information

<sup>5</sup> A Bengali word literally meaning first rice.



groups. It also includes information trawled from the internet in response to needs identified by information agents and project researchers.

The newsletters are distributed widely, initially for free and now for a nominal cover price. The information agents take the newsletters and share the information in them with their information groups which are made up of some of the poorest women in their own neighbourhoods. In this way, information is shared with women who are illiterate, and knowledge from those women is shared with others through the newsletter. The newsletter and its content are therefore widely circulated within formal and informal networks in the community. Moreover, the newsletter is connected to the ICT centres in numerous ways: publicising them, consolidating support groups around them and circulating information drawn from them. It is both a practical means of gaining benefits from ICTs and a way of integrating them into the community. The Nabanna project is understood by participants to be a general information provider as well as a way of circulating local knowledge. It is also understood as a project that develops their skills and self esteem. In one example, some information group members suggested that the project workers hold an awareness meeting about polio vaccinations. A government worker had been labouring on this issue for some time, to no avail. The women felt that Nabanna would be listened to because of the role and reputation it has developed in the community as an information resource that is integrated in community networks.

### Sitakund

In *Sitakund*, by contrast, the project was initially formulated largely as a computer and internet centre for young people with a stress on training large numbers in the practical use of computers and the internet. Wider linkages developed in response to participants interests, identified through local research. Many of the most active youth are involved in local 'culture clubs',<sup>6</sup> and attend the centre as culture club members as much as general computer users. These social gatherings are accommodated next to the computer room, and have become an important social gathering and networking space for many young people. Some of these young people have formed a local researchers group, have been trained in basic methods, and are conducting significant amounts of ethnographic action research - including the writing of fieldnotes and creating social maps of media use in their villages.

It is this social networking – as much as actual computer use – that reveals the strong potential for multimedia projects here. For example, the young people have a keen interest in music. There is interest in developing computer-based audio recording and editing, and CD production. In addition, the parent organisation for this project has a local video production unit which has recorded some of the cultural events that are taking place in the centre. There is a strong possibility of developing stronger connections between computer, audio recording and video over time. The centre staff have begun to conceptualise



<sup>6</sup> Self-organised youth groups, with different degrees of formal or informal organisation, that meet regularly, often around cultural activities (music, singing, poetry), but also for general socialising.



the centre (and their plans for its future) in terms of a multimedia centre rather than a skills based computer training centre. This transition is gradual but indicates the way in which the project is responding to its communities of users, their needs and activities.

## Darjeeling

*Darjeeling* has four centres along the Darjeeling Himalayan Railway, and each one has developed quite different media cultures and social networks. One of the centres immediately attracted large numbers of children, who have become its main users. Beyond computer and internet training and use, they spend a lot of time around the centre, preparing songs and performances. The staff have responded to this by accommodating appropriate access and training, and have developed an orientation to issues of schooling.

In a second centre, by contrast, the strongest link is with local youth, who have generated a number of very active participants and volunteers. Linkages are quite diverse: for example, there is a strong interest in multimedia and in specific kinds of vocational training (eg, soft toy manufacture) which may have only indirect ICT connections. However, there is also a different kind of linkage developing: staff and participants participated in a local HIV/AIDS awareness march not only by mobilising and marching but also by posting information around the centre. This was part of the development of the project from being a technology centre to becoming an information centre: that is to say, the focus is now less on the use of specific ICTs and more on the flow of information from computers to community and vice versa through word of mouth, posters and eNRICH. In fact the central media technology that is emerging from this centre is 'the noticeboard' – whether electronic (eNRICH) or hardcopy (walls for posting information) - which embodies the idea of free and transparent access to useful information.

Unfortunately, to the dismay of the local centre staff and communities, at the end of March 2004, the Northeast Frontier Railway closed the centres on the basis that they were not sustainable. Although negotiations are continuing, at the time of publication of this document, the centres remain closed.

## Tamil Nadu

The six *Tamil Nadu* projects are housed in rooms provided by individual self help group (SHG)<sup>7</sup> members, run collectively by the entire SHG and aiming to involve members from wider SHG federations as well as other members of the public. Although these centres have been largely focused on computers, there are some significant media linkages, all of different types. For example, firstly, the presence of peripheral equipment – particularly digital cameras, telephone and printer/scanner/photocopier have arguably made an impact comparable to the computer itself, particularly in the most rural groups who have had least access to 'modern' paraphernalia. The experiences of answering the phone for the first time, or using it to phone a technician at the local technical partner, cannot be separated from the experience of using the computers themselves. They were part of the same conception of the centre as a space of modern technologies with multiple, and sometimes confusing or problematic, functions (for example, the telephone became a focus of disputes over bills and usage). Similarly, as discussed in detail below (Empowerment chapter), use of the printer was a significant technical achievement for some users, and it became

<sup>7</sup> Groups of 15-20 women meeting, initially, to self-organise micro-credit activities: regular contributions of small amounts of money to a central savings fund (normally kept in a bank account), from which members can periodically borrow as well as use to leverage larger loans from local institutions. Often formed and operated in relation to local NGOs, participants develop skills in managing money (including keeping accounts) and in self-organisation, as well as developing much-needed savings both for cash flow and for investment purposes.



a technical and social focus in its own right, not just as an adjunct to the computer. Finally, in Tamil Nadu, as elsewhere, there is considerable excitement about visual multimedia – computer drawing, digital photographs and use of Powerpoint. It can be argued that some users divide the computer itself into multiple technologies: it is both a tool for learning essential modern skills (mainly Microsoft Office) and at the same time it is a visual medium for personal expression and enjoyment through activities such as drawing and watching DVDs.

## Seelampur

Seelampur is also largely computer and internet based, and initially aimed at computer training and vocational development for adult women. This changed almost from its first week of operation: its target community shifted from older women to their daughters (whom their mothers believed should develop computing skills for their future). A huge number of enthusiastic young women were able to come to an establishment located in the Madrasa, under the Maulana's<sup>8</sup> patronage. While participants wanted structured computer training in Microsoft Office, their enthusiasm for media was clearly focused on the multimedia possibilities for self-expression. This was also very much in keeping with the evolving ethos of the centre: this is a space in which young women, normally restricted to home, could socialise freely and enjoyably, say what they wished, develop their confidence and learn in the broadest sense. This translated into an engagement with media involving audio recording of stories, songs and poems, exploration of a range of visual genres, and combining the two through computer animation. As part of the research process, they also wrote diaries and held group discussions. As detailed below (Poverty chapter), the connections between computer based activities and non-computer based vocational training is indirect and subtle.

## Namma Dhwani

In terms of media mixes, *Namma Dhwani* 'radio' is already a hybrid of different media. Because only educational institutions are currently allowed to operate community radio in India, Namma Dhwani evolved a system of 'narrowcasting', firstly by playing audio cassettes over loudspeakers or at meetings and homes, later by transmitting programmes through the local cable TV network (which demanded that listeners get used to the unusual experience of listening to radio on TV). The technical discussions with the local cable operator themselves paint a picture of a new medium developing through combinations of older ones. Both programme making and centre management are closely integrated with local SHGs, as well as a pool of committed volunteers and locally recruited studio managers. Computers were introduced after radio, and the challenge is to integrate the two. Currently computer use is largely restricted to computer training. This is partly due to technical issues, in particular unreliable connectivity, so that computers are largely not seen as a source of information or means of



<sup>8</sup> A madrasa is a religious school run at local level by the mosque and local Muslim community. Although they are widely different across Islamic societies, the Seelampur madrasa offered exclusively religious education plus Arabic and Urdu (though there were plans to introduce secular subjects). As is typical, this madrasa had about 300 resident boys but no girls.

A Maulana is both director of one or more madrasas, as well as a major religious and educational authority within the wider community. In the Seelampur case, Maulanaji was a major figure within the entire Delhi Muslim society.



communication. However there is a promising initiative to archive and catalogue the audio programmes digitally, creating a computer-based information source for the community that is not dependent on broadcast. Moreover, the researcher downloads websites to a portable drive on a weekly basis and stores them on the computers to help provide an information system that also facilitates some radio browsing programmes.

## **Tansen**

*Tansen* is a Community Multimedia Centre that trains young people in basic computing and internet use, and audio visual production. It is connected to a local cable television network and participants have the opportunity to make programmes for local distribution. A carefully designed training programme is conducted which has changed over time as the centre has learned more about the needs and abilities of young people and about opportunities locally. Initially the centre trained in video production and related computer skills (such as digital editing), aimed at the production of video programmes. It has now established links with local FM radios in the area, giving participants another platform for the distribution of their content, and the opportunity to further develop skills in video and radio production. There is also a local community newspaper in the district, so that *Tansen* community Multimedia Centre has partnerships with and access to a range of community based media platforms.

Following training, many of the students go on to work in teams and make socially relevant programmes for a local TV cable network, and for radio. By January 2004 the students had produced 16 programmes that were being aired on TV. Media literacy is a major focus of the centre, as is providing an access point to new technologies for users. Students of the centre use facilities like internet, photocopy, printing and telephone free of charge, and their training is also free. There is an effort to include the most marginalised young people, many of whom have received training in the centre. Continued research and engagement with past students to work to help them gain employment has shown that social attitudes need to be challenged through the work of the centre and the media content they produce. For example, a talented student of the centre who could make money from the skills he has learned, by video recording weddings, is unable to because of caste restrictions. The centre is attempting to challenge such inequality through the production of TV and radio programmes that address pressing social issues such as this.

## **Uva**

In contrast to the very local character of *Namma Dhwani* and *Tansen*, the *Uva* network of Community Multimedia Centres operates on a huge geographical and population scale. *Uva* Community Radio (UCR) broadcasts to an entire province, and the multimedia centres are widely dispersed. Both this and the organisational model it adopted has involved some separation between the media as far as participants are concerned. Firstly, operating radio on this scale, and under institutional arrangements with both Sri Lanka Broadcasting Corporation (SLBC) and the local provincial council, gives the community radio some of the problems and accountability of a public broadcaster, with a consequent emphasis on 'running a radio station', rather than a more fluid community media centre. Secondly, the project is organised through a team of 20 'communicators', young people who have received a relatively high level of professional training in journalism and radio production, including operating digital production facilities. The community's involvement at this level, however, is limited. The technologies are largely mediated to them through the communicators, who assist them in generating and producing programmes. The effort to mobilise the community through Knowledge Societies has achieved an uneven success in different parts of *Uva* Province.



Computer and internet access is organised through well equipped ICT centres with lease-line internet connectivity. Though delayed through most of the research period in 2003, ICT centres were operationalised in 2004; in two cases the centres are co-located with community radio stations (Uva and Giradurukotte); the third is located at a farmers' resource centre (Buttala).

## About This Publication

These eight ICT project sites – whose research and experience provides the core of this publication – are ongoing local initiatives that are still in the process of development and evolution. The ictPR project itself is in the process of transforming into an enduring research and project development network that is extending itself beyond the original initiatives to other South Asian sites.

This publication presents a picture of what we have learned to date, through intensive research and project development work. The stories told here are generally narratives of discovery and often of surprise. The discussion is presented in the style and spirit of the approach that ictPR has pursued throughout this programme: we emphasise rich and complex local material – drawn from fieldnotes, interviews, diaries, observation and much more – that researchers and participants have been generating; and we seek to draw wider lessons by studying them within the comparative context of ictPR as a whole.

We have organised this publication in terms of the themes developed by the researchers since October 2003.

**Chapter 1** Media content, innovation and use, focuses on the media and ICTs themselves. We explore some of the central issues concerning how participants understand and interact with the media they encounter through the ICT initiatives. This discussion emphasises the innovative, surprising and creative uses of media that emerge through these engagements with combinations of communications resources.

**Chapter 2** Poverty, addresses the complex meanings of poverty in communities across the programme, and the different issues these raise for establishing relevant ICT initiatives. To a large extent, the promise of ICTs lies in their indirect and often unexpected benefits rather than in direct and instrumental benefits such as jobs or immediately useful information; yet this obviously poses challenges where poor people have to make very immediate sacrifices to participate in an ICT project.

**Chapter 3** Learning and Education, presents a theme that emerged as central to the way in which people understood poverty and poverty reduction, as well as central to the way in which they framed ICT projects. ICT initiatives have a huge potential to introduce new styles and approaches to education that can impact on social norms, and aspirations, as well as advancement within conventional education.

**Chapter 4** Empowerment, explores local meanings and experiences of empowerment, recognising the multiple and often contradictory meanings of this concept as articulated by members of the communities. Gains in confidence, voice and social agency were clearly impressive but key issues are, again, the mix of direct and indirect sources and types of empowerment, and the need to follow these gains into their consequences for the individuals and families involved.



**Section 5** looks at Social Networks. Social inclusion and exclusion are central to poverty processes, and we investigate how ICT initiatives can connect participants to wider social circles and at the same time create, or reconfigure, local social networks. In fact, the centres themselves often act as 'hubs' in which a wide range of social networks can interconnect, widening the social and informational resources of participants.

**Section 6** Embedding ICT projects in Communities, develops the discussion of social networks in terms of the organisational networks of the initiatives: how do they work with different organised and non-organised constituencies and how do they develop a place within the community.

Finally, the Conclusion draws together some of the major issues from these discussions, and suggests some lines for future development.

This publication can be read in conjunction with other publications and online resources: Ethnographic Action Research: A User's Handbook<sup>9</sup>; a short film about ethnographic action research<sup>10</sup>; profiles of the project sites and information about the programme can be read on the ictPR project website <http://ictpr.nic.in>. As more detailed and comparative analysis is undertaken on the research, findings will be published in reports and academic and development journals. These will be announced on the ictPR website.

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<sup>9</sup> <http://cirac.qut.edu.au/ictpr/downloads/handbook.pdf>

<sup>10</sup> <http://www.creativeindustries.qut.edu.au/research/cirac/documents/ICT3.mov>



## 2 MEDIA CONTENT, INNOVATION AND USE

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**T**he ictPR initiatives encompass a wide range of technical, social and organisational combinations that have allowed us to investigate some of the many different directions that community ICTs can take, as well as the ways in which different media and media mixes can be related to poverty reduction. In many respects, the ictPR initiatives are elaborations of UNESCO's platform for community multimedia, a concept that developed out of the organisation's long standing work with community radio. Community Multimedia Centres (CMCs) combine traditional and new ICTs. For example, radio and internet were combined in the Radio Browsing format that was pioneered in Sri Lanka. The main idea is that these media are stronger in combination – they have highly complementary strengths.

For example, computers and internet have both an 'obvious' and a more subtle relationship to poverty. On the one hand, people regard computer skills as essential for future advancement, especially for young people and children. People tend to link them clearly and unproblematically to general literacy and education. On the other hand, computers are general purpose machines whose direct and practical relevance to poverty reduction is often unclear. Once people have access to computers and internet, both a wider sense of their relevance, as well as connections to other media, develop rapidly and in locally specific ways, especially through multimedia projects.

Whereas computers and internet are often seen as global, unfamiliar and as rather general facilities, community radio and video can be very much part of a local context: trusted and familiar, and more directly and immediately intervening in the local communities they serve. Radio and video are more likely to be perceived as communication projects, making products (programmes) that are clearly



targeted at specific information needs (as well as entertainment). To take one example amongst many: entering a remote Sri Lankan hilltop tea plantation inhabited by Tamil workers, UCR communicators casually asked about a crèche at the entrance to the village. Local women complained bitterly about the lack of heating and bedding for the infants, so that their children were not being cared for properly in the cold while they were out in the fields. The communicators could simply take out their recorders, gather information and interviews and edit for transmission the same day.

There is a history of community models for radio and video which has yet to develop for computing and the internet. There are also media formats such as chat shows, documentaries and phone in programmes that supply strategies for addressing local issues. Computing and internet provision has been very responsive in providing and adapting computer training and looking for possibilities for extending media innovation. In terms of responses to community information needs that might parallel community radio and video it is clear that models and resources for community computing and internet are underdeveloped and ad hoc, and yet involve specific issues of labour, technical expertise and media specific formats that are different from radio or video. Some of the more promising developments have to do with reframing computing and internet in terms of media mixes, and mixing ICTs with local communication and information channels. Moreover, eNRICH was in some respects an attempt to provide a ready-made, but customisable, format that could tailor local ICT content to local needs, in way that seems to come more naturally to media like radio and video.

While the computer provides an access point to a seemingly unlimited amount of information via the internet, distribution of information gleaned in this way to local poor communities can best be achieved through more traditional media technologies, such as radio. It is these complementary strengths of the various media, and their different links to communities, that makes the idea of media mixes so promising. This has led to the development of strategic plans to develop sites further along such lines, accompanied by appropriate technical support, and continued, responsive research.

## Media Content and Innovation

A key finding is the need to identify and nurture the innovative, adventurous and pleasurable ways in which participants explore the possibilities of media and media mixes – especially in terms of local content creation. Rather than simply understanding these technologies as tools for accessing and circulating useful information, participants engaged with them in far more complex and creative ways, mixing information and entertainment, the learning of skills as a pleasurable activity in its own right and skills as a means of directly changing their circumstances.

An example of this can be seen in the short digital film, *Sonali Tantu*<sup>1</sup>, created by some women in the Nabanna project. The women were inspired by the visit of one of the research coordinators, who had brought with her a video camera and a camera operator to make a short film about the research methodology. Shortly afterwards, the Nabanna project workers were approached by the women who asked if they could make a film, just as their visitors had done:

<sup>5</sup> View this short film at <http://cirac.qut.edu.au/ictpr/downloads/SonaliTantu.WMV>



As usual I was conducting a group discussion, more of an informal chat really, with some of the [information agents] on the various steps of jute processing. This led to an idea of a movie on the various steps. As they have seen us using the digital [still] camera before, they asked me how to go about it... The things that came to my mind first are how efficient this camera is to make a film. It has a very little [memory] space and is without sound. Therefore, we have to record the voiceover separately. The quality of the sound recorder is bad. However, their enthusiasm encouraged me to try to give their idea a proper shape. I [wanted them to make the film themselves] therefore I asked them to do the whole thing. First, we discussed the various steps of the production process. Nilima noted down the steps:

1. Smaller plants
2. Grown up plants.
3. Putting them in the stagnant water
4. Peeling out the jute & the sticks
5. The drying process
6. Trading

### Day-1

[We] started at 11:30 a.m. for our first shoot. Mita selected the field, which was 5 minutes away from the ICT Centre... it took 5 minutes by road and 15 more minutes on the field. We were walking through the paddy field with very high probability of falling either in the mud or in the pond. Mita was repeatedly saying, 'Didi2 if snake bites what will you do?' I was so busy balancing my body that I did not reply. Finally we reached the right place and took the shot... It was a sunny day, when we reached the Centre the other girls said that they never knew that filmmaking is such a tough job. Then Geeta transferred the movie into the computer. It was very small, it got pixillated as we tried to see it on a bigger size. Well, again we have to go there. All our efforts were in vain. We decided to do it on the next day.

### Day-2

... This time I was more confident and so was Mita . A meat trader enquired whether we he could be of some help. I was surprised. I asked him how he could help us. He said he could accompany us to the field. Before I said something, Manashi said we are efficient enough to do the job on our own. We finally took the shots in bigger size and came back to the Centre. Our next step was to fix up a date to shoot Step 3. We were told that have to wait for a few days, as it needs some more time for full growth...

### Day -3

Mita, Geeta and I went to a place 15 minutes from the Center to shoot Step -3. It was a perfect situation. Mita started taking the shots. Suddenly, she said: 'Didi, Geeta, this camera is going crazy'. Well, the battery was down - another wasted effort...

### Day -4

It was a good day, just before coming to the Centre Geeta took the shots both for Step- 3 and for the peeling.

<sup>12</sup> *Didi* is the affectionate name that the women use for the project workers – literally it translates as 'elder sister'. The project workers are often called '*computer Didis*' by local women.

**Day-4**

To take the shots of the drying process was very easy. All the roads, houses, roofs were full of fibers... On that day whole lot of people asked us how we will be able to make a film with these small shots. The girls said 'come to the Centre after a month and see what we have done'. They were so confident, but I was not sure how actually ... to edit the film. The movie editing software that I know is not available here; on the other hand I do not know how to edit a MPEG movie. Anyway, I was confident about that I could solve the problem some way.

At that place, a person was making knots of the dry jute fibers. They said that the tying process should be shot, as all jute are kept and transported like that. The person who was shot (who is there in the film) suddenly started giving pose. I told him this is a movie camera, so he can do his job and we will shoot him while working. He was so happy that he started smiling while tying the knots. Another person who is a trader said that from tomorrow he could charge people extra as he has worked in a film. But the guy who was shot told the other person to charge high price for the jute as it was shot. It was a nice experience - everybody likes stardom.

**Day -5**

It was Sunday, and the Centre was packed. Everybody was interested in the shooting. Geeta and some other girls went for the warehousing shoot. One of the warehouses was there on the way to the Centre from our apartment. I proposed them to go there and asked them to request the people to allow them to take the shots. One of them said that they would enter by force if they do not allow. The job was done successfully by the candidates.

**Day-6**

This was the last thing which need to be shot - the trading part. In a near by bus stand there is a place where all the farmers come and sale their jute and it is transported to various places. Girls went there to take their final shot... after each and every shot there was a complaint from the [women] that the memory stick is so small that they can not capture the whole thing. The shooting is almost complete. Now we have to edit the film. We have to incorporate some voice over... [and] make a title card. I have finally decided to make the movie in Window MovieMaker. We had already made a trial version. They suggested that jute sticks should be shown separately and their use, if possible... Nilima and Yashoda have already prepared a write up on jute production. We hope to finish the film after the puja holidays.

*Fieldnotes from Nabanna researcher on the film making process*

This interest in self expression and experimentation developed through the use of media mixes and has led project workers as well as participants to develop new skills. In this way we can see that basic skills development can be achieved effectively through creative engagement with media technologies. Additionally, and importantly, the level of media literacy that is developed through such exercises is significant. Participants learn how to create media content, and in the process, they learn how the media content they otherwise consume is created.

In Seelampur, within its first few weeks of operation, there was a strong demand from participants to explore technologies that they had only recently encountered. The project workers showed the women a series of CD ROMs that they had made covering tailoring, candle making and other activities. The intention had been to encourage the women themselves to make clothing or candles, but instead the women asked if they could make a CD ROM:



The participants will be using movie-camera for filming practical lessons the community will deliver at the ICT Centre... The community's desire emerged during the process of participative demos I have been holding in the Community for past several weeks. The women kept on observing me and my demos for several days. They became very curious and inquisitive about the digital camera constantly with me and they thought filming and CD production which I outlined was not so difficult for them to handle. They asked me 'Madam, can we make film also? Can we handle the camera?' At this stage, I encouraged them to make the film and start handling the camera themselves which generated tremendous excitement.

*Fieldnotes from Seelampur researcher*

The young women, many of whom had considerable visual skills, also explored drawing in a range of genres. One young woman, for example, showed the researcher her notebook which contained designs drawn from a wide range of genres, from Hindu mythology and Muslim history to Disney cartoons and contemporary fashion. She was then able to develop these visual languages through computer drawing. Participants have also been enthusiastic about using the microphone to record songs, poems and stories, as well as to see themselves on the monitor via a webcam.

I have noticed total, effortless and dedicated involvement of almost all women in the Paint Brush and few creative tools available on our computers. After few days they also started getting embroidery work they have been doing and some of them have also brought few paintings they have been doing. I have been overwhelmed by their sharp design skills that are not only 'clear' and 'uncomplicated' but equally 'simple' and from their day to day lives. I think tools such as Paint Brush and Adobe illustrator provide the women with tools to further reinforce their design skills. Our visitors from UNESCO and from other organisations ... have been very impressed by the design capabilities of Seelampur women... I have [been] personally enriched a lot by their creative skills. Be it 'Naath' (songs glorifying the Prophet), 'Ghazal' (melodies of love and tragedy) or 'Drama' (as plays and opera are called in this part of the world); the beautiful women of Seelampur are capable of enacting them extempore without any prior preparation. They have soft, melancholy and mellifluous voices that express their poetry very well. As singing and acting is considered a disreputable task these women use ICT Centre for expressing their suppressed talent by recording songs, plays etc. their creative works [have struck us] for which we are planning to produce 'Voices of Seelampur' combination of audio and video...

*Fieldnotes from Seelampur researcher on the creativity of participants*

These various strands came together when some of the young women told a tragic romantic story, heard at school, about a Kashmiri girl whose boyfriend dies. With technical support, they constructed a Flash animation that combined the drawings, spoken narrative and music.

Digital photography has generated excitement in many of the initiatives. One of the Darjeeling centres, for example, organised a picnic and had taken a lot of digital photographs. They were assembling these into a vaguely narrative form and considering different ways they could be presented (eg, with Powerpoint, or by making a slide show). When it was pointed out that they could assemble still images into a film using the (free) Microsoft Movie Maker, just as





the Nabanna project had done, this opened up possibilities of group learning in which participants could investigate local subjects, photograph them and structure them, learning and combining a range of ICTs along the way.

These experiences are both powerful and pleasurable in their own right. They also develop skills and a sense of command over prestige technologies, and they facilitate group learning. They tend to foster project-based (rather than formal and theoretical) engagement with technologies, in which skills are learned in the process of achieving a product that is interesting and relevant to the participants. It also develops the conditions for using these tools to document the participant's community and use them to intervene in it socially and politically.

All of the above examples of content creation have taken place in sites that concentrate largely on computer and internet (and print media in the case of Nabanna). These content creating activities in Baduria and Seelampur emerged directly from the needs and desires of participants in the initiatives, rather than project workers. This demonstrates clearly the need to develop approaches to these new technologies that can tap into local creativity and the desire for self expression and will allow users to explore new technologies on their own terms. To this end, the ictPR project is currently exploring and developing ways of providing training in digital content creation.

Other sites within the ictPR project also have access to radio and television. Here, local content-making is a central component of the projects, and the 'broadcasting' of the content brings an interesting and powerful additional element.

In Namma Dhwani we have seen how women have found their voices, and how this has positively impacted on their personal and social identity.

In terms of programming an outstanding example would be Meena herself. From being an almost mute woman to have found her own identity as studio manager is an exemplary case study ... same with the volunteers:

Devi, one of the most brilliant and composed volunteers from the neighbouring village learnt a song from our music Library, for a district level music competition and won it!

Padma: one of the committee members had made a programme about her own self improvement after joining her Sangha. This programme has been re-played about 6 times out of popular demand. She has become a celebrity of sorts and of late she was telling me that she has lost count of the number of people who have complimented her on her "confidence and ease while speaking" on ND.

Also, I think like all community radio stations over the world, hearing one's own voice is a boost to one's own morale and confidence. I have seen how volunteers fumble, lose their voice, stammer and stutter to becoming articulate people who smile and enjoy their moment of glory in front of the mic.

*Notes from Namma Dhwani researcher*

One of the Uva Community Radio 'Knowledge Societies' worked with 'communicators' at UCR to produce a highly innovative media event that combined community politics and a new radio format.

Farmers in the Bibila area were unable to sell their produce at reasonable prices and were requesting the establishment of 'economic centres'. Local people were frustrated with the lack of action on the part of the



authorities and invited a number of them to what was ostensibly a straightforward public meeting. The site of the meeting was in fact the scene of the start of an early nineteenth century rebellion against the British by local Sinhalese and indigenous people who ambushed the British governor from behind a huge rock at the entrance to a local temple. When the politicians arrived, they were ambushed – from behind the same rock - by Knowledge Society members wielding bows and arrows and dressed in period costume, who led them into the meeting hall and continued a performance that combined historical narrative and contemporary issues. This was of course not only a public event but was also video-taped and recorded for radio broadcast.

The event began (the characters are all village headmen and indigenous leaders from the earlier rebellion:

The actors hide behind the main rock at the entrance and other surrounding places. As the crowd enters (walking) through the main entrance to the temple, one of the actors hoots, and all the others follow suit.

**Butawe Rate** "Who enters...are the British who brought Wellassa into ruin returning?"

**Rala**

**Hoots**

**Mohottala** It is not the British Sir, but our own people

**Butawe** But Mohottala, don't get close. Do not trust even our people, our history stands proof for that

**Character 3** No, Mohottala it is our own people

**Mohottala** Why don't you climb down and see sir, it is our people who have come

**Butawe** I can also see that it is our children, oh, but they're dressed like the British...laughs...wait 'till I come down...

The last time such a huge crowd gathered here was in 1817...laughs...I am furious to see the British Agents who ruined Wellassa. But we didn't lose that day...

**Tribesman** Yes we didn't lose

**Butawe** True, Suguna, the British Agent died from your arrow that day.

Children, see who sleeps under that pillar, is it the British Agent who destroyed Wellassa? "Sylvester Douglas Wilson!" [the British governor in 1817]

The performance culminated with the appearance of the Devil from a hill near by, who makes a dramatic entry, and starts questioning the politicians and officials present:

- What have the villagers requested from you?
- For how long have they been making these requests?
- Why haven't you done anything?



- ♦ When will you take action?
- ♦ Is this another false promise?

'The politicians present were quite nervous. They were bound to admit their mistakes in public and give solutions to the people.

They have planned a second re-evaluating session to assess the progress, where the devil will come running down from the cliff shouting that the following has not been done.'

*Researcher's report, Uva*

In Tansen, where training young people in ICT skills is envisioned as a route to empowering youth as agents of social change, media content has been made that explores social issues such as the environment.

We have finished our basic course in computer so nowadays I and all my friends are planning to make a programme about the problems and solutions of plastic bags to make this programme, we (our group) had a discussion for about half an hour. After the discussion, we made up our mind to set the programme and decided who is going to be cameraman, narrator, script writer and editor. In this way we divided the different responsibilities to all of us. At 4.00 PM, we went for the video recording. We visited almost all the bazaars in Tansen and took video related to polythene bags. We took interview with different sellers and people walking in the street. We asked them about the advantages and disadvantages of polythene bags. When we finished our video recording and interview, we came back to CMC and took a rest for few minutes. At the same time Mahesh sir and Anil sir brought a TV to watch the video recordings that we had made. We watched the recordings for half an hour and then discussed about it.

*Participant's diary from Tansen*

In all of the projects, the desire from participants to generate local content emerged almost from the start, and project staff responded to them, sometimes reorganising much of their programme to do so. While participants' sense of the relevance of and their interest in computers and the internet was often talked about in very pragmatic ways – in order to even be considered for an office job one would need to know computing, and the internet is useful for finding information and news – it was through more creative uses of these and other ICTs that participants seemed to develop the most skills.

A key finding from the research is thus that content creation itself is a powerful means of engaging people with media technologies that has added benefits of allowing them to voice their concerns and share and learn locally relevant knowledge. Furthermore, skills and training in content creation that can be articulated up will be the most useful for participants, and having access to more than one distribution platform (e.g. radio, the internet, local intranets, video, print) will expand the reach of that content. In order to achieve this more inputs are required in training the trainers and in finding the most appropriate software and hardware packages and media mixes for these kinds of local content creation activities. This is an aspect of the initiatives that UNESCO is working to further develop.

## Information Management

It is evident from the discussion so far that ICTs in poor communities can be much more than a means of delivering useful pieces of information such as accessing market prices or health information via the internet. However, this kind of information access is important, and has been developing in the ICTPR initiatives. More than simply accessing information, many of the initiatives have been creating,



circulating and/or archiving indigenous knowledge. In the Tansen project, audio visual media have been used extensively to develop programmes on local issues for broadcasting over a local commercial cable television network, and in Namma Dhvani radio programmes have been developed for audio broadcasting over their local commercial cable television network. But what about the use of networked computers and the internet for the mining, creation and circulation of information?

It is often difficult for users to obtain relevant information directly through internet or other computer use due to language and literacy issues, and the amount of online time required to develop internet skills. Situations in which people accessed directly relevant items of information from computers or internet were generally mediated by project staff. Here the projects played an important role in providing information, and at the same time learned that the role of mediation itself is time consuming and requires careful attention, not just to issues of accuracy, but to issues of usability and relevance.

In the use of computers and the internet it is important to note contradictions concerning the issue of local language content versus English language content. On the one hand, there is frustration over the lack of local language content, particularly in relation to finding specific useful information, while the problems of generating or accessing local language content are enormous: translating English content (either in documents or in interaction with users) is time-consuming and stressful for staff; font mapping software can be unreliable or difficult for users. On the other hand, there is an enormous demand for English language training in some of the sites, particularly amongst the more educated users. Computers, the internet and the English language go together in many people's minds, not simply because English dominates these technologies but because both together signify an idea of modernity that participants are seeking to access through engagement with this technology. This may be fairly specific to South Asia (and above all India and Bangladesh) but many of the initiatives were surprised by the strong demand to learn English rather than (or in addition to) localising the internet in local languages.

Many of these issues of information access and management can be illustrated through our experience of the eNRICH programme. At the inception of ictPR, UNESCO commissioned the National Informatics Centre (NIC), of the Department of Information Technology, Government of India to develop a multi-purpose portal for use on stand-alone, networked or internet enabled computers throughout the ictPR project. eNRICH can be implemented so that users initially log on and access the computer through this portal, which then offers an organised information environment that is presented in their local language and script. eNRICH includes both information management and communication facilities. Firstly, it allows the ICT centre to organise information under categories that they feel are relevant to the local participants. Both content and categories can therefore be developed based on local research and experience. Content included under these categories (which may be texts, images or sounds) can point to documents on local drives or to websites. Secondly, eNRICH's interface includes direct access to bulletin boards and other messaging systems, and the ability to post texts and images locally to be accessed by other users.

In other words, eNRICH can function as a local language portal to organise both the information and social interaction roles of computer use. This has provided an important learning and research experience concerning the management of information within projects. The implementation of eNRICH has not been smooth or uniform across sites. As with any new software, eNRICH has gone through a series of improvements as projects have identified bugs and other problems in terms of local implementation. Users in Seelampur, Baduria and Darjeeling have integrated eNRICH into their everyday use of computers to some extent, with users logging on through eNRICH and checking noticeboards, looking for and

creating messages, new images and documents and consulting information on their local intranet whenever they used the computers. This has required instilling specific habits of using the facilities, and a concerted effort by staff to regularly update information and encourage users to add their own, and interact with the portal. This approach requires both consistency and time from local staff over the long term. Where this has worked, it has worked well. In other sites this has proved difficult and sometimes counterproductive to maintain, partly because participants developed their own routines of computer use, or projects were unable to make the software work for them. Often this was an issue of the inability of the software to work in local languages. As the sites and software develops it will be interesting to observe the usefulness of information management software such as eNRICH.

What the use of eNRICH has highlighted well are the complexities involved in information management itself. Firstly, as Seelampur and Darjeeling discovered, the most useful information was often simple documents about reliable doctors or health information. This simplicity is extremely labour intensive to achieve; it requires gathering, organising, translating and verifying information. It was beyond the capacity even of Seelampur, with a dedicated staff member, to develop this extensively. With greater connectivity it is possible that participants would be able to carry out more of this work by downloading and possibly summarising internet information in local languages.

This raises a second question concerning the validity of information: some kind of quality control is required to ensure that information is reliable. In one case, an ICT centre 'desk manager' whose job was to specifically work on eNRICH was developing a document about cervical cancer from a variety of websites. He had little idea as to the reliability of any of these sites, or reasons for choosing these particular ones. In Darjeeling local women expressed their concerns that they were 'housewives' and therefore worried about accessing the internet because they would not be able to judge what information or sites were 'good', and what were not. The researcher there worked to develop relationships between ICT centres and local professionals (health, legal, education etc.) to get their input on the reliability of information. Such panels of local experts who verify information might lead to the development of a shared and validated information database across the entire ICT programme, a development which would in each case help increase community involvement and the local embeddedness of projects. One purpose of eNRICH is to identify and preload authenticated web addresses where people can get reliable information – this is therefore technically possible in all of the initiatives (though there are technical hitches in some), but labour intensive and demanding of local input from experts. As eNRICH becomes more embedded in the initiatives it will be interesting to see what solutions are found to this. In the meantime there is evidence that eNRICH can work well as a way of initiating people into the idea of the internet:

Karma daju came at 1:00 p.m, The centre was packed with members and some of the members were waiting for their turn. Now-a-days our member feels very open and friendly in the centre and used eNRICH and they write jokes and used it like offline internet. They learn internet so fast because they are already using eNRICH and they know how to Browse and to make ID.

*Notes from Darjeeling centre co-ordinator*

Where there are problems, initiatives are working around them, finding ways to provide good quality, reliable information on matters that their research tells them are appropriate to the local area, and reviewing and adding to this information over time:

In Nabanna project the main objective is dissemination of information through the direct beneficiaries. Our need assessment survey showed health as an area where information really lacks.



Therefore we picked up health as a first area for information dissemination and started talking/interviewing community women, health centre workers and doctors.

In the last but one Pulse polio program I met some people from UNICEF, one of them was a Doctor from UNICEF New Delhi who proposed to introduce the topic anaemia in the information dissemination process. According to him most women in poor families are affected by anaemia and it would be a very good idea to introduce this topic and see the reaction and of course take some intervention strategies accordingly.

It was a good opportunity for me to ask how do we get proper and right information preferably in Bengali. All of the UNICEF people asked me to visit UNICEF office and asked to collect material from them.

Therefore we gathered a book published by UNICEF in Bengali on anaemia and it was scanned and converted into a slide presentation by the local researchers. We wanted the beneficiaries to see it by using eNRICH but it did not work therefore it is kept on the desktop as short cut on one PC in the Baduria centre.

Keeping in mind the importance of the source of information, at the last slide we mentioned from where we have received this information i.e. UNICEF.

Going through the presentation and noting down all the important points is a compulsion for the visitors. ...

They will go to their information group members and discuss whatever they have noted. The next week when they will again come back to the centre and they will key in questions that arose during the IG meeting in the form they filled up last week.

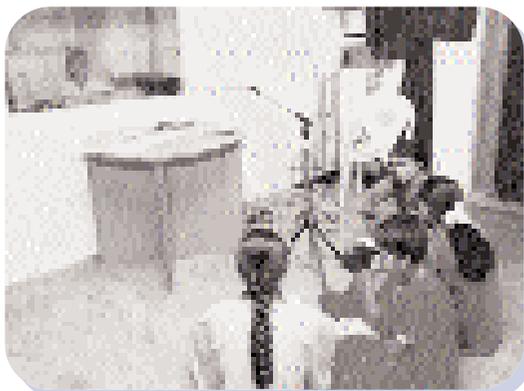
The information was available from 31st May 2004(Monday). The first feedback came on 7th June 2004(Monday). This whole week would be given for feedback from the visitors who came to the centre last week. Then the questions would be placed in front of the health centre doctor to find out the replies of the questions and would make them available in the computer. Thus the women would get their answers.

*Fieldnotes from Nabanna researcher*

There is a clear need to work more on the development of knowledge management and networking capabilities of the initiatives. A lot has been learned to date about the problems and opportunities knowledge management presents. The usefulness and useability of eNRICH has been patchy across the initiatives. The ictPR project is now working with NIC and others to further develop eNRICH, experimenting with an open source solution to a content management system that can be networked across the sites as well as being locally customisable.

## Media Use

In terms of media use more generally, another key finding is that it is important to recognise that many participants find that using ICTs is fun, and that this enjoyment is not necessarily in opposition to more 'serious' ICT engagements that involve direct or more obvious interventions in poverty. It is also important to recognise that this feeling of fun and excitement is actually a complicated experience. The pleasure illiterate people take





in typing their name on the keyboard and seeing it appear on the monitor or listening to their voice on the radio is clearly an experience of symbolic and real triumph over prestige technologies and over the profound disadvantage of illiteracy. These kinds of involvements with ICTs have an impact on participants' sense of social status and self-worth, and assert a right to a different social place.

The importance of this excitement and pleasure to poverty reduction lies in building personal, social and technical capacities whose informational consequences may emerge over a longer term, and in unpredictable forms. More profoundly, the distinction between serious and more popular uses of media points to the importance of paying attention to what participants consider useful or important in their media use, and indeed what they actually recognise as 'information'. Careful, grounded research is crucial to understanding the relevance of information and how it is actually used and circulated.

For example, information group members in Nabanna are clear about what counts as useful information, but it does not always conform to development concepts of information needs. While they are certainly interested in health and employment information, the most popular item in one of the newsletters were the recipes, which everyone discussed and tried out and clearly treated as significant information. In Seelampur, too, it was Chinese recipes downloaded from the internet which first generated understanding and enthusiasm about the meaning of 'accessing information through ICTs'. Similar examples involve information about fashion and films. In rural Tamil Nadu a breakthrough occurred when the SHG leader helped her grand-daughter search the internet to find the national bird of India. The value of information content, and its value in producing an understanding of information access, can arise from diverse and unexpected sources. It is on the basis of such breakthroughs that other kinds of information searches and applications can be built.

In terms of what participants find interesting in their existing media consumption habits, it is clear that different people constitute different audiences, and that projects are sometimes challenged to deal with issues that might be locally sensitive:

I asked them about the kind of stuff they liked to watch on TV. They said that the soap operas on TV taught them a lot about lives of other women and that different women learned the right and sometime the wrong from these serials. But more than anything else, TV had for them become an addiction that they needed. We somehow got talking about health and media and they started to tell me about these different shows on TV. One on the Tamil channel is a phone in with a gynaecologist. She said that it is very nice to see people from all over talk about stuff like sex lives, fear about small penises, reproduction problems so openly on TV. If they can do it why cant we on ND she asked me?

*Fieldnotes from Namma Dhwani researcher*

These same women had earlier made a programme about menstruation for Namma Dhwani,

I asked them how they felt after they heard that programme on the radio. Usha, the more vocal woman, said that she felt good that she was able to discuss this on the radio because people have to be aware. She said that she has noticed that in many households mothers were rude and suspicious when their children missed their periods and did not think that it could be just a health or nutrition problem. ... I asked them why even in Budikote I have come across many women, who are educated and aware but still get their daughters married off, bowing to what they call public pressure - the 'What will people say?' syndrome Usha said that in this day and age it is impossible to please everybody and that if someone came up to her and asked her that question about her daughter then she would explain that until 18, a girl would not be mentally or physically fit to carry 'the burden of marriage'.

*Fieldnotes from Namma Dhwani researcher*



Not only have these women learned how to create content, communicate it and review its usefulness, they have learned a high degree of media literacy. Thinking about the audiences for programmes, as well as the intrinsic usefulness in terms of the information content is crucial – the Namma Dhwani team routinely thinks about what different audiences locally might be interested in and what kinds of programming will appeal to them. Namma Dhwani was generally perceived as ‘women’s radio’ until the station started providing daily market prices and men started to tune into it. Discussions about patterns of prices and cropping with agriculture department representatives and farmers further sustained their interest and participation.

There is a clear difference between the perceptions of information and its importance. Most of these perceptions coincide with stereotypes of ‘male and female interests’. In March, the team for the first time decided to cover some ‘hard topics’ and the election itself.

The reasons for covering political processes was because over the last year I noticed that most development work had a close relationship to regional political process. Be it roads, electricity, agriculture schemes etc. I have also noticed the men’s tendency to take ND seriously mostly when we cover issues related to governance.

*Fieldnotes from Namma Dhwani researcher*

In terms of what is an appropriate use of technologies, projects had to deal with the question of computer games, and several changed their policies and approaches over time. Participants’ use of computer games can be understood in very different ways, and their inclusion or exclusion from ICT centres can be justified on various grounds. They might be prohibited as frivolous, or because of insufficient computer resources. They can be used to teach basic computer skills, and computer game formats can be used to teach literacy or school subjects. Games can also be allowed simply because participants want to play them: centres may feel that denying participants what they are demanding is a wrong use of their power to frame technologies in terms of their own moral and development agenda. Finally games (as well as films and music) can have more indirect connections to evolving ICT use, in the sense of multimedia and project work described above. Each position involves different views as to what can and should count as information access and proper ICT use.

Related to all of this are the issues of popularity and fashion. Again, ICT development literature tends to assume that popularity and fashion have no place in understanding the information needs and uses of the poor, yet in all of the projects, they were crucial. In the most general sense, as described elsewhere, ICTs are associated with being modern, educated and of high status; particularly with young people, this was sometimes translated through concepts of fashion and ‘cool’: it is cool to use computers and to have access to cool content which includes not only music, games and film but also, paradoxically, ‘useful’ information (e.g., participating in an HIV awareness event based on information drawn from your involvement in an ICT centre was cool in Darjeeling).

In a group discussion in Nabanna about ICT use and social change, the young women got into a heated debate about wearing jeans. Fashion was clearly an idiom through which they were thinking about changing gender roles, sexuality, the nature of modern life and urban versus village life. If this is how young women are thinking through the central issues of their lives, then internet content that appears frivolous from an ‘information needs’ perspective (mere entertainment or consumerism) takes on a completely different meaning and importance.

Similarly in Seelampur, fashion and entertainment content was powerful when understood in the context of participants' lives. It is not simply that young women from highly restricted backgrounds valued the freedom to access what they found pleasurable. In fact, research showed many of these young women had been consuming a steady diet of soap operas and romantic fiction during the afternoon, after the male family members had gone out and after domestic duties were done. They were often leading a very intense imaginative life through these media (as was often expressed in their diaries), but in complete social isolation. What was new about participating in the centre was the ability to do something with this imaginative life: to share it with others and talk about it; to use this material in new forms such as drawings, narrations and animations; and to place it in a real world context by accessing, for example, entertainment websites. Similarly, in Namma Dhvani, information about famous films stars downloaded from the internet is used by volunteers in their music shows developing a distinct radio jockey style which otherwise was restricted to 'listen to this song, from this movie...'

All of these issues concerning 'what is information?' and what is the meaning and role of 'entertainment' give project staff moral and political power in defining information and information needs. They also pose the issue of how – or whether and when – ICT initiatives should develop these popular pleasures: when to treat them as means to an end (e.g., ways of stimulating interest in ICTs, ways of teaching skills, etc) and when to treat them as ends in themselves. Both research and responsiveness were crucial throughout the ictPR project in dealing with these issues, and in each project there were negotiated settlements of these questions, often evolving and changing over time.

## Technical Sustainability

Technical reliability and maintenance were crucial issues in mediating both participants' and staffs' engagement with ICTs. Expectations of what modern technologies can do, and what they can do for participants, are very high, as are the sacrifices that people make to access them. When classes are cancelled or activities disabled by local power cuts, or by hardware and software problems, or internet access is patchy (or even abandoned) because of unreliable phone connections, there is not only frustration and disappointment but also difficulty in integrating ICTs as reliable and taken for granted elements within local communicative ecologies: they simply do not become a normal part of participants' media landscape.

Moreover, technical unreliability can increase fears and insecurity. For example, in the Tamil Nadu projects, where computers were housed in self help groups, directly under their control, every crash increased participants' fear that they would be held personally responsible, and financially liable, for damage. As they could not distinguish confidently between hardware and software problems they were simply afraid of 'breaking the machine'. In fact, the problems did range from broken power supply units through to failure to understand Microsoft's Windows XP registration system so that the computers shut down every month for the operating system to be reinstalled. Similar issues arose in terms of equipment security: in two projects, thefts of digital cameras precipitated significant crises that impacted on relationships both to the media themselves and to the projects. This range of issues, and the difficulty of diagnosing, let alone dealing, with them, raised considerable doubts in the minds of local groups as to their realistic ability to sustain a computer centre without their current full time staff support (or at least more consistent and well planned support). This problem impacts on whether local participants regard ICTs as a surprising and temporary 'privilege' or as a permanent and embedded feature of their communicative ecology.

On the other hand, when participants can deal with technical issues themselves, or when they know how to access the necessary expertise, there were clear benefits.



Meenakshi is a separated women, mother of a girl child. She lived with her husband only two and half years. She is living with her daughter past ten years in rented house with her daughter. She is an illiterate. She is working in a hollow block (cement bricks) company for daily wages. If the company gets an order they will work or otherwise she won't work. She became a member of the Thendral SHG in the year 1997. She is young and energetic. How she used the information technology is amazing.

The instructor of the centre asked him to teach, how to use the copier. Meenakshi just observed what he was doing. The next day, they want to take Xerox front and back. The instructor try to take the Xerox but she was not able to take the back side, and wasted lot of paper. But Meenakshi tried and Xeroxed it successfully. Women are surprised and congratulated her. It became the news of the day in the village. When I went there many of them told this story. But she explained to me that she never thought of it. She became famous . She gained lots of hope by handling the new technology. We have installed a Tamil software from TATA Consultation company to educate the illiterate to read within 90 days. The installer explained to them how to use it. Meenakshi was not there. But when I was there I just opened it and showed to her the software. While I was away, she opened it again. When the instructor was struggling to go to the next lesson she showed it. She found out the games and the other lessons more quickly than the degree holder. She is very much appreciated.

*Fieldnotes from Tamil Nadu researcher*

Technical reliability and sustainability is therefore more than a straightforward issue of keeping machines working. It has direct impacts on the way people relate to both the media and centres, and the extent to which they feel local ownership over these facilities. There is a clear need for more extensive technical backup (or technically skilled partner organisations) that can maintain equipment, and a need to build local capacity to undertake this role.

Budikote apart from facing severe power cuts also faced regular equipment break down. The delay in servicing and maintenance from agents in Bangalore only dampened the enthusiasm of the team. In the recent past, they have been able to source technical expertise from local towns that not only is time saving but cheaper too. To service radios that would not work, one of the field staff who had skeletal electronic knowledge took it upon himself to repair the radios and supervise the cable network. It has been difficult to find people with technical interests and skills but extremely beneficial when such collaborations are fostered.

*Fieldnotes from Namma Dhwani researcher*

## Summary Of Key Findings

The media models and initiatives have been under development for only one year but the potential of an inclusive and multimedia view of ICTs seems clear, and some bases for developing it stand out.

Content creation itself is a powerful means of engaging people with media technologies and developing sophisticated ICT skills that has the added benefits of allowing them to voice their concerns and to acquire and share locally relevant knowledge.

Engagement with all the ICTs brought out innovation and creativity in poor users and communities both in content and in understandings of the media. It is important for initiatives to respond to and build on this energy, motivation and initiative (as is often explicitly demanded by participants) and to do so through flexibility in training and organisation, through securing the most enabling technical support possible and through sensitive and locally-specific research. By reflecting both on this innovation and on their research into local poverty processes, initiatives can also find creative and appropriate means to channel some of this activity into more directly poverty-targeted media



content and use, but in ways that are appropriate to and that build upon participants actual engagement with ICTs.

The sites have demonstrated a significant local capacity for expression, programming and production using a range of media. Mixed media approaches have clearly facilitated an increase in local users' media literacy and a greater capacity to express their ideas concerning a range of issues and ideas.

The finding that working with ICT and media is fun, and that this enjoyment is not necessarily in opposition to more serious ICT engagements that involve direct or more obvious interventions in poverty should not be underestimated, especially in terms of the self-motivation and initiative demonstrated by many users.

Initiatives employing new ICTs can build upon existing community media and multimedia models (particularly community radio and video) which have long traditions of community content development and participatory training and production. This can help shift computer and internet use in the community from general purpose skills and information access to the production of locally relevant content, both through local management of information, and through incorporation of content into media and multimedia formats that are closer to the community. The spirit of media innovation we have been describing is completely capable of sustaining these developments.

Integrating ICTs with established media like community radio also draws on the strong organisation and ownership models of community media, which has positive implications for the sustainability of local ICT initiatives. In many cases, through this process of integrating media, technologies and resources we are seeing the potential emergence of local community knowledge organisations.

The work with eNRICH reveals a much wider scope to develop new solutions for local content development, packaging, organisation and dissemination. This approach clearly requires a greater degree of local training and ongoing technical support. The process of evolving solutions to meet grassroots needs is being further supported and developed.

Finally, as we discuss in several places, a central goal is to embed ICTs and ICT content as part of local life: listening to the radio, watching TV, using computers and internet. This is aimed not only at individual users and small groups, but also formal groups within the community: schools, government groups, medical facilities, etc. More specifically, in the South Asian context cable radio and video are extremely promising because of the large number of small, local and independent cable operators. There are some parallels in the large numbers (but more skewed distribution) of computer centres and schools and internet cafes. What is promising is the circulation of content (drawn from diverse sources) within media that are familiar and localised.



# 3

## POVERTY

The overall aim of ictPR is to explore how ICT interventions can make an impact on the lives of poor people. Researchers work to develop detailed pictures of how poverty is understood, experienced and lived in their locality. They do this by investigating the question 'What is poverty?' throughout their research, using methods such as interviews, observations, diaries and mindmapping. The focus is on how people express their own understanding and experience of poverty. This work clearly shows the importance of understanding poverty as different in different places and at different times. ICT interventions that attempt to reduce poverty must be aware of the specifics of the place in which they work and the experiences and aspirations of the people whom they involve in their work. The research therefore looks at domestic and gender relations, work, insecurity and a range of other conditions that define poverty locally.

### Definitions Of Poverty

The ways in which poor people define poverty clearly support ictPR's approach: poverty is understood as a complex condition that involves issues of voice, empowerment, rights and opportunities as well as material deprivation. People define poverty in very broad terms. The core meanings of poverty go beyond issues of material deprivation to include education and literacy, aspirations, women's rights, freedoms and safety, and social participation. The common 'poverty indicators' such as health and education facilities are widely raised, but they are part of a more complex and diverse picture of poverty. Moreover, even material deprivation is generally identified in ways that are specific to a location and a culture. People generally also emphasise the life opportunities that are open to them and their families: many people define poverty in terms of lack of choice and opportunity, inability to fulfil their potential, lack of voice and powerlessness.

Education, discussed later, is central to many people's definitions of poverty because both illiteracy and bad or incomplete education vividly sum up what prevents them and their children from advancing within the modern world.

#### **Seelampur:**

Poverty is NOT being able to:

1. Provide education to children for want of money
2. Meet the daily needs of life
3. Afford to have a house of our own
4. Study further because of mother's illness
5. Pay donation to obtain a job, if some how we struggle to acquire education
6. Afford proper medical treatment
7. Start any self employment venture due to lack of funds
8. Raise funds or obtain loan
9. Acquire skill

"Poverty is a curse because of which we do not have proper place to live, we can not go to school to study. We can not move forward in life"

*-Saira*

"Poor have dream to give good education to their children so that they can become big people. But this dream dies in their heart because of lack of money"

*-Zubaida*

"An ill like poverty can only be eradicated by education"

*-Salma*

"Poverty is absence of adequate resources due to which a person dies before getting properly treated. Some time this resource is information about good inexpensive health care facilities available near by. "

*-Talha*

#### **Namma Dhvani:**

Poorest - no water supply, no house, no land, one meal a day, bad health, parents no education, coolie labour, higher expenditure than income, kids going to school but hard to pay for it.

Middle – 3 acres of land but without own water source; asbestos or moulded (concrete) houses; 20 sheep, 2 cows; no food or clothes problems

Rich – big house (2 bedrooms – privacy – can shut door)

#### **TANUVAS:**

From rural groups:

Poverty is.....Widowhood, illiteracy, hunger, unemployment, old age not knowing English, lack of relatives, lack of water, lack of rain, drunkard father...(Children's Day group discussion)



"Those who are living without three meals a day and don't have a house to live. Those who have too many children without having any property. But I am not living in extreme poverty because I am having three meals a day out of my hard work. But now I have the fear and feel insecure, how many days can I work like this?" (In-depth interview)

"We think, if we have money we don't have any problem, but more than that living without freedom under a drunkard husband is poverty". ( In-depth interview)

"limited opportunities for women to explore their talents is poverty". "(In-depth interview)

"Living without a husband in a young age and depending on sister and brothers for everything, denial of participating in public functions and any good event, always having fear in the mind how to talk, how to laugh... and not having courage to overcome all these can be called as poverty". "(In-depth interview)

"no choice to choose big items in life, like government job, expect agriculture work because of illiteracy and lack of wealth". (In-depth interview)

From semiurban groups:

**Rani** defines poverty as "everybody is telling that we have to work hard to improve our status of life. How come it is possible. We are willing to work hard and who is there to provide us job. Our condition becomes worse day by day .We are struggling daily to feed our children. We are not able to send our children to reputed high standard school.I, not able to provide good clothes and depending on Govt. public distribution system on cereals,kerosene and sugar. It is not sufficient to us .We are highly affected by unstable work."

From urban groups:

"I am getting meals,clothes,shelter but I do not have freedom to do any things. My husband scolds me even if I laugh.I am always dependent on him to do anything" stated by Mrs **Selvi**.(field notes 2.1.04)

She is stressing that lack of freedom at home is poverty.

*What is poverty? Some extracts from researchers' notes*

Several aspects of poverty emerged across the ictPR project:

- Extreme poverty is often identified in terms of a hand to mouth existence in which meeting basic needs (food, clothing, shelter) on a daily basis excludes people from other activities and aspirations.
- Material deprivation is identified differently in different places: eg, in terms of significant local issues (eg, alcoholism in Darjeeling; access to water in Budikote; specific gender issues in Seelampur and Tamil Nadu); or local views as to what is good housing (owned rather than rented in one community; concrete in another).



- Insecurity is emphasised as much as deprivation: insecure employment, uncertainty about meeting needs tomorrow, the fear of having to deal with any crisis by incurring unmanageable debt.
- Illiteracy and lack of education are usually considered a main reason for chronic poverty; greater education and knowledge, as well as educational qualifications, are usually put forward as the main solutions to the poverty of both family and community. People frequently describe themselves as poor on the basis that they cannot afford to support their children's education.
- Inability to maintain social status or social participation: e.g., inability to pay dowry, buy jewels, offer hospitality or bear the costs of festivals.
- Lack of capital to fund ventures, and lack of access to loans to meet crises or to make major domestic investments (e.g., build a house, or travel abroad for work). Poverty is not just being unable to meet daily needs, but also the inability to build and maintain a life over the longer term.
- Poverty is frequently defined in terms of the development of the individual: it means restricted choice and opportunity, the inability to develop one's talent, potential and aspirations
- Health information and facilities are out of the reach of poor people, while illness brings catastrophe through unemployment and debt.
- Lack of freedom and oppressive social structures: for example, women talk about the restrictions on the mobility, education, work and social life that both arise from and reproduce poverty; people closely associate their poverty with domestic discord and violence, including dealing with alcoholic, violent or absent husbands.

It is important to note that many local understandings of poverty are contentious, either for participants or project workers or both. For example, in numerous cases poverty was identified as having too many daughters and not enough sons, thus incurring dowry costs and forfeiting income. Some people put this forward uncritically as a self-evident reason for poverty; others criticised families for continuing to have children until they had a son, or for ending their daughters' education in favour of sons on the basis of their future earning potential or social value. Project workers, whose centres represent a direct intervention in such social norms, implicitly or explicitly contest these views of poverty whilst at the same time learn to understand the context in which they exist. In this way, local definitions of poverty are not uncontested truths; they become part of the learning processes around the ICT centres through group discussions, research, changes that arise from centre activities, training and general social interaction.

It is also important to recognise that poverty is always relative poverty. ictPR was remitted to explore ICTs and poverty reduction among the very poorest communities but participants themselves drew many distinctions between different kinds and degrees of poverty. Moreover, poverty changes over time, and insecurity is itself a crucial aspect of poverty. Different kinds of poverty cannot always meaningfully be ranked quantitatively into poorest and less poor, while official poverty classifications and people's declarations of poverty are not a reliable guide as to who



is and isn't poor. Finally, people experiencing different levels or kinds of poverty do not generally live in different worlds – they lead interconnected lives, and ictPR facilities were often highly valued as meeting places for people experiencing different levels of poverty and deprivation.

## Poverty And Participation

In order to achieve participation, media and technology programmes have to understand and deal with certain basic structures of poverty that materially prevent people from accessing ICTs or that prevent them from exploring the possible relevance of ICTs in improving their conditions. It was the poorest and most marginalised people who most clearly articulated this, but they are issues that confront people at many different levels of poverty. Poverty itself is a barrier to participation which initiatives have to overcome before they can hope to make a difference in poor people's lives. In particular the poorest are often restricted through:

- Lack of 'spare' time
- The need to earn daily wages
- Lack of mobility
- Marginalisation

In addition, there is not, in practice, a straightforward and general way to connect poor people to ICTs in an effort to reduce their poverty. Below, therefore, we discuss the restrictions listed above and the key issue of relevance and practical outcomes.

Women frequently pointed to lack of time to participate in centres after attending to household work.

'I did not have lunch today as I have only small quantity of food hence I did not eat .I kept it for my children. They can't tolerate hunger.'

Under this situation I feel it is difficult for Jayanthi to learn computer. She is working as a servant maid and earning Rs 200<sup>13</sup> per month and her husband is doing laundry work. He is earning Rs1500 /month which is not sufficient to run the family. If she is to learn computer she feels it would be difficult to make ends meet.

*Fieldnotes from Tamil Nadu researcher*

Many people say they cannot forego any potential earnings in order to participate in activities.

**Researcher** Why do you want to take [computer] training?

**Kishan** I want to change my life style. I hope after learning computer knowledge I could get a better job.

Before my next question, he asked me, how could the centre help him to get the training. He further said that he is earning daily and he has to work to earn money because he is poor; he wanted to take the training in our centre but he said how would it be possible for him to take the training. He was expecting financial help from the centre so that he could run his life and could take training too. I was very shocked to hear his voice. I told him about the skills that the centre is providing but not financial support.

<sup>13</sup> About US\$4.36. 1 INR = 0.0217955 USD; 1 USD = 45.8809 INR at time of publication.



He is really poor. To change his life style he has to take training and for this he has to leave his work. If he leaves his work for one day there would be nothing to eat in his house for that day. So here I would like to raise one question regarding this boy: How can we help to reduce poverty if we are giving only ICTs training?

*Fieldnotes from Tansen researcher*

These types of restrictions exist even though there is no charge levied for poor users.

Mobility – physical and sociocultural - is an issue that each initiative must address. Participation of the rural poor may involve transport costs and time which are hard for them to meet and justify. Women are often dealing with severe restrictions on their mobility: in Seelampur and Sitakund, for example, Muslim women cannot travel or use public spaces without socially accepted reasons, and in Nabanna it is usual that for both Muslim and Hindu women, their whereabouts are closely monitored and delays in returning home are cause for concern and reprimand amongst most families. Hindu fishing communities in Sitakund were amongst the poorest and most marginalised within the programme: geographically remote, with poor transport; the level of poverty made travel prohibitively expensive and only justified if there was direct monetary benefit; inhabitants were regarded by Hindus and Muslims in the surrounding villages as having the lowest social status. The idea of participating in an ICT centre was almost inconceivable, though some of the young men nonetheless expressed interest at the possibility of activities that would bring them into the town centre. Similarly, participation in Uva Community Radio Knowledge Societies was severely hampered by long distances, poor roads and isolation of Tamil tea workers in remote plantations. Conversely, radio programmes that linked to local campaigns for road improvements were amongst the most popular and effective in showing the relevance of ICTs.

Marginalisation is a common experience amongst the poor. The poorest often feared or assumed that ICTs and ICT centres were not places for people like them: the very factors that structured their poverty – caste, illiteracy, gender – also seemed to exclude them by definition from prestigious modern technologies. People often assumed that both ICTs and ICT centres were only for educated people, and for people who understand English, as well as those with a certain class based confidence and articulacy; illiterate people frequently asked if they were only open to the literate. Moreover, the design of the centres themselves could suggest that it was not for them:

People used to fear entering the ICT centre. Not only is the centre equipped with computers but the appearance of the centre must have given an expression that the centre is meant for some one better than themselves. The centres are well furnished with marble flooring...

*Fieldnotes from Darjeeling researcher*

By contrast, the Tansen centre has managed to include a large number of youth from traditionally marginalised caste groups. There is a common understanding in the town that the CMC programme is for the poor and particularly youth from low castes. From one of the Tansen participants:

The main criterion to get entry in this centre is poverty. I mean the poor and marginalised young people could only get opportunity in the centre. So being poor, it has given me the opportunity to be the student of the centre. I came to know that the centre was built for the poor people. The centre is helping students to become some what able to work in society.

*Interview notes from Tansen*



Given these problems of access, particularly for the poorest and most marginalised, the relevance and practical outcomes of ICTs to their conditions is harder to demonstrate, and has to be demonstrated in terms of more direct practical outcomes.

While the Darjeeling researcher was interviewing in a quite remote Himalayan village, one participant stormed off angrily:

**Prem:** What will poor people do by learning computers? If we go to learn computers who will feed our stomach. Poor peoples spend their life as a labourer. None of us here has time for computer. Will starve if we don't work for a day. Anyway what is the use of learning computers. Hey, Nima, let's go for work, why do we need to waste our time here? We are not going to benefit anything out of it. it's the same old thing, they simply document, nothing will happen practically...

*Fieldnotes from Darjeeling researcher*

In these circumstances people saw the potential relevance of ICTs largely in terms of whether they would yield immediate jobs or income. For example, a women's group in Sitakund rather angrily asked why the centre did not teach useful things like embroidery or bidi binding. These were older women, engaged in various low margin businesses, who had little contact with the town (even though it was close by) and had never seen an office or computer. In a nearby village, another women's group, when asked what YPSA should do with its computers, replied that we should give them directly to their village and they would rent out time on the computers by the minute: they were obviously seeing the computer in terms of Grameen mobile phones.

It needs to be stressed that these views were largely expressed by the poorest and most marginalised, and to some extent the most rural. However, many of these people (and particularly the young) did take a completely different position: they made considerable sacrifices in order to attend media centres regularly, and did so for more indirect and long term benefits, as well as for enjoyment, rather than for immediate material gain. It is also significant that once people could get to the centres and engage with the activities and social networks, they generally took the broader view of their benefits.

## Hopes, Aspirations And Change

The very idea of 'poverty reduction' depends on understanding how people formulate and act upon aspirations, concepts of social change and imaginations of the possibilities open to them. These themes are also crucial for understanding how people relate to ICT centres and skills. For most participants, access to ICTs represents real or symbolic access to modernity, the future, education and knowledge, and therefore ICT centres constitute a space into which people can project and develop a sense of change and possibility.

Debu bhai, we need to learn some more programs for our development. Because I've an objective which can be successful or fail. If the god blesses I want to go abroad like Italy or Singapore, any country. If I don't learn computer well I'm thinking what I'd do out there because it is a scientific age & I'd try very hard to learn some spoken English in between so that I can walk further in the way of life.

*Sitakund participant feedback form*

Although some people saw themselves as entirely trapped by poverty, most expressed aspirations, usually projected through their ambitions for their children. By far the most common aspiration was for the younger generation to complete their education as a means to secure white collar work, and

preferably secure government employment. It was widely believed that computing skills (and certificates) were increasingly necessary for modern employment, along with English and typing.

**Namma Dhwani researcher** What have you thought about your children's future?

**Farmer** There is one decision I have made and that is to never let my sons become farmers. I want to educate them as hard as it may be so that they can get some secure jobs like in the government may be.

**Namma Dhwani researcher** Why?

**Farmer** Because I have suffered enough and I want them to have secure lives.

*Interview notes from Namma Dhwani*

However, there was a considerable gap between these aspirations and people's knowledge of this 'modern world'. Both parents and children had little direct experience of offices, professions and the range of modern work. In general, young people are literate but their parents (or mothers) are not, and have no personal understanding of the kinds of skills they believe to be necessary. They therefore find it difficult to articulate precisely how education or information translates into improvement or jobs, or to assess the quality of education and to make informed choices over their very considerable investments in education. Some of the poorest families were investing enormous resources in private computer schools and other tuition which they often knew to be of very low quality; they often valued ictPR facilities not only because they were cheaper or free, but because they clearly offered high quality teaching and learning.

For example, Meenakshi, living in a rural Tamil Nadu village, is illiterate, separated from her husband and living on coolie wages of about Rs500 a month. Nonetheless she is spending Rs30 a month on private tuition for her daughter, plus the cost of transport and school meals, and she is involving her daughter in the ICT initiative extensively. Nonetheless, Meenakshi's understanding of contemporary work is limited to her own experience of hard 'outdoor' labour, to which she contrasts 'indoor' office work.

**Researcher** What do you want your daughter to do?

**Meenakshi** I would like her to become an office worker. But I don't know. She is studying well. I don't want her to work in the hot sun. She should work in a cool place. Working in the hot sun and getting low pay is horrible.

**Researcher** How are you going to educate your daughter?

**Meenakshi** I can educate my daughter up to SSLC in Varakalpattu. After that I have to send her to Cuddalore or Nellikuppam. Government is giving free bus pass. I have to spend little more. I will educate her. It is the only aim of my life. If I need money I can take loan from the sangam.

*Fieldnotes from Tamil Nadu researcher*

Young people's ideas of job possibilities were often very limited. Poorer girls, generally restricted to domestic labour, faced a standard choice between several low margin, low skilled occupations such as bidi binding, mat weaving or paper bag making; or more skilled home work in embroidery or tailoring. Amongst those young people who attended the ICT centres, there was



a widespread ambition to learn computing skills in order to become a computer teacher, or to use the skills to get office work (there were several claims – for example in Darjeeling – that they had failed to get jobs for lack of computer training). More educated girls and many boys aimed at teaching jobs, and those with some skills or education already raised income by giving private tuition.

During the orientation to the computer training fifteen of the sixteen enrolled said that they wanted to learn computers because they wanted jobs. None of them however knew what kind of job they wanted. From interactions with students and volunteers the general feeling was not the lack of access to technology but the lack of knowledge as to what to do with those skills. Also the young girls, despite aspirations, were not sure if they would ever be able to have a job, if they were married off.

*Report from Namma Dhwani researcher*

Young people in particular expressed many aspirations other than employment and education, many of which can be summarised under the idea of empowerment. Young people feel they are growing up in a world where they expect to be literate (whereas many of their parents are not), to be knowledgeable and educated, to move beyond restrictive family and community norms in order to lead more autonomous lives, and to have a higher status within their communities. ICT centres fit these aspirations particularly closely, both because of the modern and prestige associations of media and new technologies and skills and because the ICT centres themselves tend to be perceived as free spaces in which people can develop autonomy and confidence. For example, a young woman from the Seelampur centre narrated the changes in her life which encompass both material and social development:

Her father earlier had a workshop where he made handicraft beads, which requires lots of physical labour. They belong to a lower caste (being engaged in slaughtering of animals). In their family, the women are not allowed to go out. She recalled that once, while she was coming to the centre, she was seen by her friends. When she told this to her mother, her mother got very upset, thinking this news of her daughter going out will bring a bad name to her daughters, and hence she was persuaded by her parents to discontinue attendance at the centre.

However, circumstances have now changed and allowed her parents to have a more flexible attitude. Her father had never allowed her sisters and her to even think in terms of doing any job or business. Now her father is ill and not able to work. Hence the sisters have to run the house. Her elder sister has a degree and gives tuition, and other sisters do embroidery work from home. She says how different she feels from other relatives who live in a village and in other areas of Seelampur.

She also narrated how household circumstances had forced her sisters to go out and earn despite resistance from their father and other relatives. Now her elder sisters support her going out to learn computer so that she could be independent and on her feet. She appeared very happy and excited and said she feels proud that her sisters are helping raise the siblings. She also shared her experience with her cousins who have never gone to school. She told how shy they felt so that they did not have enough confidence to talk to her as she is considered superior, so when her relatives came to visit her during her hospitalisation and when her sister told them that she had been going to learn computer they were just shocked, but later they were happy for her. She also told that now she has some respect at her home. Her father felt proud when he introduces her to some relatives. She said she could make out the happiness her father has on his face.

*Fieldnotes from Seelampur researcher*

## Direct And Indirect 'Impacts'

The most obvious question that community members ask (as does this publication) is, how will ICTs benefit them, and how can ICTs impact on poverty? Probably the starkest division in how people think about the connections between ICTs and poverty involves the difference between direct and indirect 'impacts'. As we have already seen, most community members attach a wide range of hopes and aspirations to ICTs, some immediate, some long term, some quite vague. Others see ICTs as irrelevant to their conditions or out of their reach because they will not impact on their immediate circumstances.

A central lesson learned from the ictPR project is that it is counterproductive to look exclusively for direct impacts of specific ICTs on specific poverty conditions. The most promising poverty reduction processes generally arise from combinations of different media and channels of communication; and these processes are often indirect and subtle, mediated through different social networks, organisations and attitudes. This lesson parallels the experience of many participants in ICT centres: they often started by looking for direct material benefits but found themselves engaged in processes of innovation and exploration whose benefits were more subtle and long term. During a staff retreat the Namma Dhwani researcher asked the core team (all local people) to list what the initiative has done for Budikote:

These are what they came up with:

Given Budikote an identity

Exhibit talent – children and women

Community members gain prestige without direct benefit.

Exposure to experts and outsiders

Made people aware that information is as important as money

Concept of volunteering for Namma Dhwani and their community fairly successful

Most of the reasons cited here have more to do with qualities of empowerment than any tangible economic benefit for the kind of poor that are being addressed or targeted. In Budikote the degree of ownership and pride that the community as a whole takes in the centre seems to be a good reason for them to sustain the efforts.

*Fieldnotes from Namma Dhwani researcher*

For some people, particularly amongst the poorest, the relevance of ICTs is judged almost entirely in terms of their capacity to generate income or employment in the short term. Those with a longer term view connect ICTs to poverty reduction in terms of education: securing ICT skills is a route to better jobs in the future, directly or by continuing into higher education. As a wall poster for a private computer school in rural Tamil Nadu put it, 'Computer education: boon for middle class': ICT skills and certificates are seen as (a necessary) part of a broader and more long term strategy for social advancement.

All the projects were careful not to feed the inflated promises of ICTs by making it clear to participants that media or computer skills do not guarantee jobs, though it was often difficult to counter these



expectations. In fact, the more direct connections between ICTs and income generation were often the least promising. In the case of computers, for example, mastering basic computer literacy plus Microsoft Word, and learning to type CVs and letters, is increasingly seen as essentially to future employment for the next generation. It is central to aspirations to white collar jobs, and some young people reported failing to get jobs because of lack of computer skills. This can have little relevance to the very poor and to agricultural populations who may not see this route as realistically open to them:

**Researcher** Did you visit the computer centre?

**Prema** I was there once. Renuka taught me paint and showed me about animal husbandry. I was not much interested on this. It is boring. It is not like TV.

**Researcher** If you use the computer regularly you will find useful?

**Prema** I got a chance from employment office to learn computer. My parents didn't allow me to learn. But, They are asking me now to learn computer from our centre. But I don't like to learn. Why should I learn? While I was asking they refused to send me to Pantruti (a town) . But they are asking me now to learn computer. Whether I learn computer or not I am going to work only in the field. There won't be any change.

*Interview notes from Tamil Nadu*

At the same time, as we saw in the previous chapter, some parents and young people see such skills as the only route out of harsh rural poverty.

Several projects focused specifically on income generating activities and direct employment benefits from ICTs and their experience points to the need to place this work in a broader context. The Seelampur project, for example, began with a strong vocational orientation, aimed at developing traditional skills through computer based training and market linkages. The young women participants – though urban – had almost no direct experience of the world outside their homes, and the vast majority of social contact was with female relatives who were largely illiterate and equally restricted in their experience. There were pervasive local traditions of handicrafts – largely embroidery and tailoring – and the project initially aimed to develop these skills through ICTs (e.g., CD based training), as well as to develop market linkages and introduce new skills. In fact, the project has developed along several intertwining tracks. On the one hand, from the very start the young women related to ICTs through their considerable visual skills, creatively exploring Paint, computer animation and design. This exploration was not necessarily directly related to vocational possibilities – it was about the excitement of developing visual ideas. For some time, the same young women explored ICT-based visual ideas on the computers while taking non-ICT based tailoring classes in the hallway outside. The two activities were not explicitly connected, but the diverse and subtle connections the participants themselves made were evident in each.





Interestingly, this approach also clearly problematised the notion of 'handicrafts' for some of the participants, and there is some evidence that they consciously rejected the idea of using ICTs simply to push them further into traditional female occupations. The work they produced, and the way they produced it, was sometimes closer to contemporary work concepts such as 'graphic design' than 'handicraft', though only a few of them (those with further education or relatives in similar work) had the experience which would allow them to take this further on their own.

The project workers had moved away from direct intervention in income generation in response to the ways the participants themselves were engaging with the ICTs. They only returned to an explicit focus on income generating activities later in the project, on the basis of the confidence, social and technical skills and freedom for autonomous activity that the young women had built up through their experiences at the centre. As in most centres, the most important impacts on women's prospects of employment emerged from providing a space that acted as information exchange, and support network, and developed a range of interrelated social, technical and economic skills and experience

On the other hand, Seelampur has also tried to develop market linkages, a challenge for young women who, when they work, do so at home, cut off from normal business contacts and practices. For example, they organised a small group of young women who produced handicrafts in consultation with outside advisors and exhibited them at a trade fair. This is a major step onwards from teaching vocational skills: the young women had to contend with issues such as quality control (and the standards required to compete on different national and international markets); dealing with finances and handling money in sales transactions; contact with both customers and other business people. The linkages with ICTs were various and sometimes very indirect: for example, internet and computers were used to access and organise information; the design skills explored on computer had both direct and indirect influences on their craft design; and the social support and free space offered by the ICT centre for women was clearly what made the entire learning experience possible. However, just as in the case of developing design skills, it would be impossible to draw direct lines between ICTs and income creation – the ICT aspects of this centre worked through a wide range of interconnected social and technical processes.

In a similar situation, a primary aim of the Tamil Nadu projects was to encourage small enterprises through vocational training that included not only production but also packaging and marketing. ICTs were used for training, designing and also keeping of accounts, but it is hard to argue that ICTs were necessary, and some interviews with participants show them stretching in order to claim that computers were an integral part of their income generating activity. (Similarly, in Darjeeling, a key intervention was their noticeboard, which included posting of job opportunities.) On the other hand, it is clear that their successes in income generation were linked to their cohesion and ambition as self help groups, and that this was given all kinds of stimulus through ICTs: the prestige of having these resources, their experience in managing and maintaining them, the confidence and social cohesion that emerged over time. Moreover, some of the more direct linkages to poverty reduction emerged in unexpected and almost accidental ways and lead to new ideas for developing both ICT skills and the enterprises: for example, two of the skills developed in relation to ICTs (printing photographs and desk top publishing) connected with the family businesses already run by SHG members.

## Summary Of Key Findings

Poverty needs to be understood as a complex condition that involves issues of voice, empowerment, rights and opportunities as well as material deprivations. Poor people themselves define poverty in



very broad and diverse terms, and do so in very locally-specific ways. Moreover, these local understandings of poverty may be contested both by poor people and by project workers. Finally, poverty is always relative, involving not only complex differences in its nature and degree but also close connections between people in different poverty conditions.

ICTs already play a crucial symbolic role in peoples' aspirations and their idea of what skills will be necessary for the future. Many poor people make large investments, at huge sacrifice to obtain ICT education and access (as well as other forms of education) for themselves or their children. Poverty itself is for many people a major barrier to participation that initiatives must work to overcome, and those who are most marginalised are often those who feel most excluded from both ICTs and therefore from future hope. In particular, initiatives need to deal with the inability of poor people to release sufficient time (and therefore income loss) from the meeting of daily needs to attend centres; and social, financial and technical barriers to mobility; marginalisation through gender, caste, ethnicity and other factors that make participants feel they have no proper place in ICTs and ICT initiatives.

Moreover, particularly in the case of the poorest and most marginalised people, ICT initiatives have a greater challenge to demonstrate the practical relevance and benefits of ICT skills and access. The issue of practical and direct poverty impacts is indeed crucial as the ictPR experience would suggest that what participants accomplish is not so much (or not yet) a direct impact on their employability or income generating capacity but more long term and indirect conditions for social advancement, such as a free space for self development, new modes of learning as well as routes back into conventional education, expanded social networks and the confidence to act socially, new ideas as to what is possible in the way of work and social relationships.

All of these initiatives are still young, and we are observing participants in their first encounters with many ICTs; projects can use research, experience and innovation to develop more direct interventions in poverty. Nonetheless, all of these more indirect benefits – which are explored further in the following chapters – seem very appropriate realisations of the more symbolic associations with ICTs – as an essential skill for future advancement - that attract them to the projects in the first place.



# 4

## LEARNING AND EDUCATION

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Education is central to people's understandings of poverty:

- Lack of education is considered a major (even the major) cause of poverty by leading to ignorance and backwardness and by cutting off access to employment.
- Inability to pay for good schooling for one's children, or having to leave school because of domestic poverty is a major indicator of poverty, and concretises the sense of being trapped by poverty.
- Access to education is the one strategy for dealing with poverty that people clearly have faith in. There is a strong belief in education as a family route to jobs (particularly white collar and government jobs) and a better future; and as a collective route to development.
- It is a major expense for many poor families who have to pay for books, uniforms, transport, food and often tuition fees, including private tuition to make up for the inadequacies of state education.
- Education is the main way in which people express their sense of poverty as denying them, and their children, the chance to realise their potentials, develop their talents and capabilities, achieve independence and self-reliance.
- More generally – and almost universally expressed – adequate education is necessary for survival in 'the modern world'.



The following quotes sum up many of these points, and how they combine:

[Education] is really important. In today's world how can one survive without an education? You are handicapped without it. It helps us to be aware and helps in getting job. How can we improve our life without an education? Even if one is very poor, I suggest education should be the priority whatever it may be. Today I regret for not being able to support my sister for her education. She dropped out because we could not afford.

*Interview notes from Darjeeling*

Poverty is a curse because of which we do not have proper place to live, we can not go to school to study. We can not move forward in life.

*Diary from Seelampur*

It is also important that education relates to a striking sense of general 'backwardness' or 'ignorance' that people express when discussing their poverty.

**Renuka:** [The sangha members] were interested to listen to the information like different type of fertilizers, soil test, new varieties of paddy, organic farming using vermi compost...But they are not practising it. They are also didn't find time to come to the centre. They are also convinced by their traditional knowledge on this. The other women don't have need to know these information. For example if we have headache we immediately send our children to the medical shop to get some tablets. So it is easy and not time consuming. Why should we look for any information on health? We are very short sighted and we like to solve the problems on the day to day basis. They are also illiterate and ignorant. ...I can say that they are convinced with what they have. They always look for the easy way.

*Fieldnotes from Tamil Nadu*

Conversely, many of the ideas we will discuss in the Empowerment chapter are specifically articulated through educational aspirations. This is particularly clear in the education of girls: in many project communities, people explicitly stated their strong desire to educate their daughters in order to ensure their autonomy, freedom of choice and ability to support themselves so that they could achieve a more self-determined life than their mothers:

Even though we are suffering to pay [tuition] fees we are doing it because we want to create a bright future [for our daughter].

What do you mean by bright future?

She has to stand on her own feet. She should be in a position to help others and her life should be model and she should have greater knowledge and should be great person.

*Fieldnotes from Tamil Nadu*

It was only when over the course of the conversation that I realised that I was sitting there with four women who were all married by the age of fourteen. I asked them if they were going to do that to their daughters and almost in chorus they said no.

**Kamakshi:** "why madam would we want the misery that we experience to fall on our children. Let them study, stand on their own feet and not depend on their husbands for everything."

*Fieldnotes from Namma Dhvani*



## Education And ICTs

We can explore the idea of innovation by starting from the experience of computer training, as many of our participants did: All the centres involved some element of structured computer training which taught basic computer literacy as well as Microsoft Office and internet functions. This was essential partly because it corresponded to people's understandings of what 'learning ICTs' means and how it can impact on their lives: it means learning the computer skills which are associated with getting jobs or advancing into higher education (word processing, including CV writing; and spreadsheets). This also included the skills essential to feeling comfortable on a computer (mouse and keyboard skills, and the ability to save and organise files, and understanding the 'topography' of the computer, such as where to find and save files). This is the basic sense of 'using computers' that is associated with getting certificates from computer schools or centres, and with possessing credentials that are accepted by employers. This approach to computing is also associated with learning other valuable and marketable skills, above all English and secretarial skills.

However, even within this kind of ICT use, people's encounter with computers is more complex than simply 'learning computing'. Firstly, we need to emphasise that learning to confidently command the computer through keyboard and mouse is an experience of mastering a prestige technology that is generally out of the reach of poor and often illiterate people

The pre-eminent stress on education frames people's understandings of both ICTs and ICT centres. Firstly, and particularly in the case of computing and internet, ICTs are increasingly seen as an essential skill for employment, further education and everyday survival in the modern world, even amongst those who have no direct experience of them: their children at least must be educated in computing. There is huge investment in buying tuition from private computer schools, even amongst very poor families, who see this educational expenditure in much the same light as investing in English tuition or secretarial skills, and in buying private tuition in school subjects. In this respect, ICT centres are primarily or initially perceived by many people – and especially parents – as cheap but very high quality computer education, as an alternative to private computer schools, that should yield both skills and formal qualifications. In this respect, computer training (as opposed to learning about radio or video) can be experienced as an additional burden for poor families, a new worry and expense that is essential for their children. Project workers have worked hard to stress the difference between their initiatives and centres from the private computer centres that simply offer computer education.

Secondly, as we have stressed throughout, ICTs are more generally associated with being educated and modern, with being knowledgeable in a more general sense. Thirdly, and more negatively, these associations often mean that ICTs and centres are seen as largely for young people, as part of their education and general preparation for the modern world, and therefore as not being for those who are older and beyond education, or who have fallen more completely out of education.

Many of these issues converge around the idea of certificates and formal qualifications. Most of





the centres did not initially offer any certificate, partly because of the practical difficulties in establishing meaningful accreditation; partly to avoid offering unfounded promises that participants would get jobs or further education on the basis of their courses; partly to avoid pedagogic models based on examination hurdles that are passed or failed.

Many participants and their parents found this refusal difficult to understand or accept. Parents with little understanding of either ICTs or education had an entirely formal and instrumental view of education: children are not sent to school to learn but to get the right credentials and certificates, in order to progress as high as they can through the educational hierarchy. Participants in centres often shared the instrumental part of this perspective: while appreciating the actual learning they accomplished at the centres, what wider value would this have in accessing jobs or higher education if there was no certificate issued? Moreover, certificates conferred a public status on participants, especially given the perceived value of education. For example, Seelampur revised its policy and presented certificates to the girls at a public event in the Madrasa presided over by the Maulana and other dignitaries who had been assembled for a major workshop. It would be hard to overemphasise the impact of this public presentation, held in the most prestigious – and exclusively male – educational establishment of the community.

Similarly, in Namma Dhvani, after conducting two - three month in-house training courses where the syllabus was largely loose and informal, the project workers decided to switch to a more formal mechanism of training because the students complained that without a certificate the value addition would not be recognised in the job market. Today the centre, after collaborating with a training institute in Bangarpet, conducts computer training with certification in four villages for concentrating on youth and their empowerment.

Whatever the combination of media, and whatever the policy on certificates, the ICTs centres provide a different model of education that contrasts strongly with formal schooling: it is focused on practice and on substantive skills rather than on formal processes and qualifications, and it opens the students to unexpected outcomes rather than following standardised educational paths.

Most people described computer education at private or public schools as 'theoretical' rather than practical – i.e., the students had little or no opportunity for hands on experience or learning by doing. By contrast, ICT centres normally mixed structured classes with a significant amount of learning by doing, with as much time to practice as resources allowed:

3.00 pm. 2 girls of Shekhpara have just arrived. ...One of them is presently studying at class 12, the other just finished her SSC exam...Both had computer science as their optional subjects but they know almost nothing about computers. The younger one took computer subject as optional but left after a few months for the following reasons—

- Only if they get an A+ grade in the optional subject will the board then add a C grade from it to the total marks. She found that there's no chance she's going to get an A+ in computer science. It was because –

- ♦ The teacher of computer science was absent from most of the classes.
- ♦ The classes were very irregular. Most of the classes were abandoned.
- ♦ The teacher didn't teach well.
- ♦ She never had the opportunity to touch a computer.



They have a total of 100 marks in computer science of which 40 marks are in practical. But neither the theory nor the practical class includes any kind of Computing!!!!!!!!!! She never used a computer before. Her practical classes include answering a short viva, writing down two questions & a few drawings... Later on she could recall that she heard they had two classes in 1st year where the students were permitted to touch the computers & they taught something but she was absent from those classes. She knew the name of key board, sound box (!) & mouse. She also knew that Charles Babbage is the name of the inventor of computer.

It took me almost 5 minutes to teach the younger one how to operate mouse. She couldn't feel easy in operating it till the end of class. They were excited to have the possession of the computer. The freedom to start the computer & MS word & close the computer by themselves gave them some real useful confidence. At the end of the class I told them to write down their experience. It was totally unexpected to them. I repeatedly had to explain to them that they can write whatever they wished.

*Fieldnotes from Sitakund researcher*

All the centres involved a balance of structured and practical learning. Namma Dhvani was a typical case:

Both the computer centre in the Government school and commercial training centre in Bangarpet have been referred to as places where training is more theoretical than practical. However computer training in ND has tried to mix both these approaches. There is a computer syllabus that is adhered to: we stick to a definite time frame and testing methods, students have equal time on the computers and in class.

During a brain storming session, interested candidates expressed the needs for formal training including notes, tests, etc. because a) they wanted to refer to their notes, in case they forgot; b) to show their parents what they were learning and justify their time in ND.

*Fieldnotes from Namma Dhvani researcher*

In fact, one boy who had learned his computing at Namma Dhvani went on to secondary school in nearby Bangarpet. It was quickly recognised that he clearly had more functional capabilities with computers than his new teachers, and he was immediately asked to handle much of the computer teaching there.

It seems clear from most of the research that participants strongly valued the feeling that this was real rather than formal learning in the sense that they came out with both understanding and skills that they could functionally use. The appreciation of structured classes, and notes and exams, is in this context connected to a desire to solidify this learning.

On the other hand, relatives might disparage activities which participants value highly but which seem remote from traditional views of serious education. The mothers of two participants came to the Seelampur centre one day to see what was happening - the girls were enjoying it so much that the mothers wanted to see if they were really doing anything useful or just wasting their time. Their impression of the project was that if it was so much fun, then





it could not be seriously useful. The researcher felt that even with the minimal cost of using the centre, they were so poor that every penny spent had to be justified. What the young women experienced as empowerment was too vague and too apparently frivolous to be justified. Similarly, from Seelampur:

A very interesting experience: one of the mothers came with a participant to inquire why her daughter was asked to bring floppy and CD. One day some women brought CDs to see how they work and whether they could really watch movie on computer. Very cautiously, keeping in mind that movie should be patriotic and should not have any vulgarity, the selection of movie was made. Yet it attracted controversy.... even for songs there was objection [that it was against Islam] but the girls are very fond of hearing music so they turned music at low volume

*Fieldnotes from Seelampur researcher*

Another contrast between ICT centres and conventional education was constantly pointed out: the centres have a friendly and supportive atmosphere, with friendly and generally informal relationships to staff and teachers. There is also a considerable amount of peer learning, with the teachers as facilitators, and it is not uncommon for active participants to step in as trainers. Simply put, the idea that education could be a pleasant and encouraging experience was a new one:

One thing that I have observed in the class is that the students feel so comfortable to interact. I don't create the environment of the teaching room rather I have created an atmosphere of friends. They feel they are with friends so they even express their grievances.

*Fieldnotes from Sitakund*

The role of teachers, trainers and staff goes well beyond a distinction from conventional school teachers. It involves new relationships to people seen as authorities, or as higher class or 'educated people'. As discussed under chapter 5, Empowerment, the project staff are important role models, and fieldnotes, interviews and diaries include a large number of statements that people want to be like them:

...behind this learning there is Kajol apu [the trainer] & Debu da [the researcher] specially Kajol apu. I think there is no other apu like her. She teaches in such a well manner & so nicely that it must touch the heart. I would have considered myself successful if I could be like her. So I like them all.

*Feedback form from Sitakund*

ICT centres are not schools but they are widely understood in relation to and in contrast to school. They are different in approach and learning style, the technologies involve quite different activities and learning processes, and the range of activities and social connections frame ideas of knowledge and information very differently from school contexts. It is precisely this tension which allows them to reconfigure participants' experiences of learning and education.

Given this generally positive conclusion, one of the disappointments of the programme has been the great difficulty in developing collaborations with local schools. One exceptional primary school headmaster in a village in Uva was central in both the local Knowledge Society (through which they had used radio to try and solve local transport problems and had participated in children's programmes) and IT Club. He saw both radio and internet as crucial in accessing new technology solutions to local problems and to teaching. He felt that students will benefit from teachers having ICT skills because teachers can go beyond textbooks to get more information and because they will have wider experience which they can bring to pupils who know little of the world outside their village.



However, preparing the ground for this has long predated the expected ICT centre. He has worked over several years to develop more open-minded attitudes amongst his staff, including making them all get driver's licences, set up cooperatives and encouraging more visual teaching methods and less theory. It has also involved getting more conservative teachers transferred to other places. Moreover, the impact of their radio involvement had already developed a great interest in listening to news and in information access generally.

This is indeed exceptional. There are instances of collaboration with local private teachers (e.g., YPSA), or centre participants aiming to introduce new teaching approaches into the private tuition they give. In Tansen, several of the CMC staff are teachers, but again this has not constructed a link to formal education and the local school system. A contrasting – and more typical - example would be Namma Dhvani. Namma Dhvani spent considerable time developing a joint radio production programme with the school:

In 2002, workshops were conducted for children from Government schools and as an outcome a children's club was formed that met every Saturday afternoon. Children used creative means like poetry, drama, music to display their own talents. The school cable idea thus stemmed from their enthusiasm.

The staff of ND discussed this idea with the staff and parents, and with the consent of the Block Education Officer, Bangarpet, a two hour schedule was included in their academic time table.

In brainstorming sessions about programming ideas and observations of classes, it was found that much of their knowledge was very text bookish and teaching styles were rigid one way communication methods... ND brainstormed with the children and teachers and arrived at a magazine format which comprised songs and news from local papers.

Within a few weeks of cable casting the programmes to the school, participation from the school children doubled. The format was also modified to include segments requested by the children like general knowledge, quiz etc. A few of the teachers also recorded model lessons.

When asked why they liked to listen to ND in their classes, most students said that they enjoyed listening to their own voices in their classrooms. A group of girls that I was talking to also said that they like listening to programmes that had nothing to do with their syllabus.

Children from lower grades began to enquire about extending the cable to their classes. However any such extension would be possible only through collaboration with the school. As much as the school connection was a success, it took a lot of manpower and time from the staff.

*Researcher's report from Namma Dhvani*

Problems started in trying to move from externally made programmes, broadcast during school hours, to programmes made with teachers for inclusion in the normal curriculum. At this point, teachers became uncooperative in meetings, claimed that there was no way to make programmes that could replace their teaching and – above all – argued that they had no time for this kind of thing.

These issues are replicated throughout the programme: teachers see new technologies as adding more work to an already overburdened job; they are locked within conventional teaching approaches; they feel threatened by new technologies and new skills (when they are often already underconfident in their own subjects); and the leap from their current lack of resources to mainstream use of ICTs seems far too great.



## Returning To Education

We can conclude with a fundamental educational role that ICT centres almost naturally play: facilitating a return to formal education. One of the clearest poverty-related patterns is the school drop out rate, particularly for girls, and the enormous difficulty of staying in school or returning to schooling. This is also one of the most painful narratives that people recount, as it is felt by them to be a story of missed opportunities, failure to realise their potential and aspirations, and their sense of entrapment.

The following narrative from a rural site in Tamil Nadu is one example amongst a huge number:

I go to school only two years. My sister married when I studied II std. She was come to the Kandrakottai to live with her husband. I became sick with out my sister. My sister took me to her house. I too come to kandrakottai when I was studied III rd std. I stopped my studies. I was with my sister. I was happy and didn't know the value of education. No one encouraged me also to go to school. My uncle (Sister's husband) asked me to go to school but I didn't go. I was with my sister nearly five years. When I became matured I was sent to my mother's sister's house. She is in Pondicherry. I was there three years. After my second sisters marriage we had problem in the family. My sister borrowed money from the money lenders and she suffered lot to repay the money. I decided by myself to help my mother. I started to go for work. I begin to earn when I was fifteen or sixteen. It is the first time I begin to feel my mother's sufferings and hard work. I try to go for all kinds of work. I learnt cooking. I was happy when I begin to earn. My mother cried when I gave her my first wages. She said, if you would have studied you might not have this kind of problem. I too feel the same. During that time it was easy to get government job. If we finished SSLC we can acquire some government job. But now the situation is completely changed.

*Interview notes from Tamil Nadu*

Girls frequently drop out of school around puberty for a combination of circumstances that include parents' inability to support children at school and the need for their domestic labour; marriage plans; low value placed on female education beyond a basic level; and low opinion of the girl's ability. Particularly in the Muslim communities, this is compounded by the perceived disreputability of girls accessing public spaces after puberty, and the fear (and realities) of teasing, abuse and other (sexual) dangers on the street. The situation is yet more painful for the many girls who struggle very hard either to continue or re-enter education only to fail higher exams because they cannot afford good private tuition in their weaker subjects.

Girls who have left school may initially come to ICT projects in order to learn a specific skill, or for direct employment possibilities. However this is only a starting point. They gain experience of a learning environment which is supportive, convivial, positive and generally focused on building confidence rather than judging success and failure (and usually achieving failure). Participants frequently respond to the situation by reactivating abandoned educational aspirations (which may have nothing to do with ICTs). Both staff and fellow participants can not only support these aspirations but also offer crucial advice, information or shared experiences about getting back into education. Mastering ICT skills itself gives the confidence of possessing one of the most prestigious modern abilities. More crudely, for many women the ICT project is the only learning environment to which they can hope to gain access, but which may provide the breakthrough into other schooling. As discussed elsewhere, girls who have not been allowed to continue education because going to school involves 'dangerous' public spaces, were able a few year later to come to an ICT centre – often after considerable negotiation with their parents – because of a combination of factors: 'changing attitudes', the local prestige of the NGO that runs the centre, hope of employment through skills, etc. Once at the centre, the girls rapidly develop confidence in their ability to learn



and to manage public social relationships, as well as pleasure in learning, and aspirations and support for further education. These aspirations may not be realised for various reasons (financial, familial or academic) but in many of these cases the ICT centre is the only place in which they might even be articulated.

## Summary Of Key Findings

Within the high value people generally place on education, ICT training has a special place in their view of what they need in order to face the future and to advance out of poverty. ICT initiatives are recognised as providing high quality training and facilities, at low or no cost, and are compared more than favourably to both public and commercial schools. There is some tendency to desire a closer approximation of initiatives to formal schooling, in particular by issuing certificates that will help in educational advancement and gaining employment.

However, ICT initiatives are also clearly valued for providing a different model of teaching and learning that stands in marked contrast to most participants' general experience of schooling. ICT initiatives are highly valued for providing practical, hands-on learning rather than 'theoretical' teaching; and for creative, informal and sociable environments which are encouraging and supportive, and which facilitate good relationships with both staff and other students.

It seems clear that ICT initiatives have a huge potential role to play in the gap between people's high valuation of education and the difficulty of continuous access (or re-entry) to good quality education. They can develop new modes and styles of learning that may extend well beyond ICT training, as well as developing media and information literacy, which are crucial to all forms of learning. Moreover, as explored in Namma Dhwani, there is the potential to help develop local school capacities in terms of both style and content of education. Closer links with local schools, or at least responsive teachers, is an important (but difficult) area for development; similarly there is scope for working with private tutors (for example, in YPSA there was a developing partnership with a local private English teacher, with the possibility of downloading course material from the internet). Particularly by enlisting local public and private teachers, ICT centres could spread their positive teaching and learning experience to computer-based or distance learning in a range of subjects. Finally, it is important for ICT centres to develop their generally informal provision of information about educational opportunities, and support for returning to education, especially as users already look to these centres for this kind of support.



# 5

## EMPOWERMENT

As the local programmes and facilities have become more established and developed, the notion of 'empowerment' has emerged as a useful term to describe the positive effects of the introduction of community multimedia centres. At the same time, it is an oversimplistic way to describe those same, often contradictory effects - particularly for women. Project staff and participants widely regarded this term as expressing the benefits of their interventions in the broadest and deepest form, and closest to the personal experiences of beneficiaries. It served as a useful way of collecting together data that indicated the ways in which communities or individuals became somehow 'empowered' to operate outside of their traditional spheres of activity, or to challenge restrictive social norms, or see though not always necessarily act upon opportunities they previously were not aware of or did not aspire to. In this respect, 'empowerment' as it is experienced in the initiatives refers broadly to the challenging of social norms, shifts in power relations, an increase in perceived opportunity, and increases in 'confidence' and the consequences that arise from this. We might define empowerment in this context as the confidence and capabilities to express oneself and to act more effectively in the social world.

The term 'empowerment' is sometimes restricted to narrow and direct evidence of confidence and capabilities, such as getting a job or acting socially or politically. We have found that it is equally important to investigate the often subtle and very indirect ways in which ICT projects have developed confidence and capabilities, especially as they make it more likely that more tangible or measurable outcomes will follow in time.

'Empowerment' has become a buzzword in development theory and policy, inscribing itself in the language of project proposals, evaluations and implementation, and in the language of the



participants themselves. This tends to obscure differences in what people mean by the term, as well as making it an essential part of how people collaborate to portray projects as success stories. In addition, empowerment is often projected as an entirely positive development, ignoring the contradictions and tensions, the gains and losses that are incurred by social change. It is fundamental to the research strategy employed in ictPR that we investigate the full range of processes denoted by 'empowerment' rather than simply seeking evidence of positive outcomes.

In Tamil Nadu, the researchers were aware that in their project sites the word 'empowerment' had been in frequent use by NGOs, bankers and government officials, especially 'women's empowerment'. They conducted interviews with project participants to see if they could uncover what women themselves understood by the word. They found many women were able to repeat the definitions they had heard at meetings - generally, to improve their lives - but also found, when questioned further, that women had their own ways of understanding (and expressing) what 'improving their lives' actually meant to them in their particular circumstances. Janaki, a mother of three, described her own 'inner energy' that prevented her from committing suicide when times got very bad recently - she quoted a proverb that her mother used, 'if one door is closed, you should have the courage to open nine doors'. This is her description of life, and how to survive. Having the courage to open other doors is what she describes as keeping her alive. Other women were critical of people 'talking about two things, women's awareness and women's development', with Sailaja telling the researcher that she doesn't know what all that means, but thinks 'if we have the freedom we can achieve whatever we want'.

We need to pay careful attention to what participants themselves view as empowering, which covers a range of things, including relationships within the home in the following case from Namma Dhvani, with a clear link to economic independence.

Most women in Budikote equate empowerment with the increase in the buying power that they have within their own families and in their communities. Meena says: "When I joined my self help group everytime I had to attend a meeting there would be a fight in the house with my husband about the timing of his food being served. Today he waits for me to come back home to have dinner because I have the courage and access to take a loan of Rs. 40, 000 that he does not".

*Fieldnotes from Namma Dhvani researcher*

Empowerment is most commonly defined in terms of increased confidence, particularly by women. By dealing with challenging experiences, interacting with others and moving outside restrictive social norms they discover in themselves the ability to do what they thought was beyond them, and to discover new possibilities. A typical narrative comes from a young woman in Seelampur:

Yasmin narrated how different she feels today than when she had come from her village. Recalled incident when she had come first time to the centre with her cousin and had cried when could not use mouse and this made her feel so depressed that she thought that her education till 10th has no relevance and use when she can not apply that for using something that everyone is using so confidently. Said she gained so much confidence and feels so motivated that now she is determined to acquire economic independence in 10 days time and has postponed her plans to go back to her village. Said now I have tested the test of confidence and chatting with other woman. Now she has been looking for a job. She will get back to her village only after she gets job,. Also shared how frustrated she had felt in the beginning days when she was not able to use computer and how due to her shy nature, and lack of confidence she missed her college opportunity.

*Interview notes from Seelampur*



It would be difficult, and in fact misguided, to separate out the various technical and social bases of Yasmin 's confidence: mastering the mouse, chatting and being in the city. ICTs and spaces of sociability are closely interlinked in her story. Both her regrets about her past and her new aspirations arise from a sense of the expanded possibilities that she can now contemplate on the basis of developing herself in a supportive but challenging environment.

Heera is a 22 year old woman in a joint family of 20 members. She is the eldest of 5 sisters and 3 brothers. Social pressure meant she discontinued her studies after 10th class, while her siblings have completed primary education only. Her father owned a workshop for artificial limbs, which he supplied to hospitals. The ground floor of their property is used for the workshop while the first and second floors house the family.

In December 2003, the sudden death of her young father shook the family. At this moment of crisis, Heera a very shy girl who had no past experience of dealing with business took on the responsibility not only for raise the family but carrying on her father's business. Her uncles had not permitted her to do so, yet she went ahead:

**In her own words:**

I have gained a lot of confidence to pursue things in the life by joining this computer centre. Whereas prior to this (joining this computer centre), I was shy and used to keep myself isolated and reserved from the rest of the world. Now it's just the reversed. Everything has changed on my part. As far as sharing is concerned, I only used to exchange my words with my Abbu. He was appreciative of my activities. In fact, I had a bet with my Abbu that if I take certificate from the centre for computer learning then he would give me a computer. But probably God didn't want this to happen. My Abbu passed away few month back. Now, I am realizing the fact that how much difficult it is to earn bread and butter, and how difficult it must be for my father to run from pillar to post to earn his living for our sustenance. It's not joke. I am thankful to Sanjeev sir for teaching me how to use internet and how to make excel sheet on computer. He taught me couple of things which I couldn't have thought of learning otherwise. It has turned out to be useful for me now when I am running my business. Now I can make my business account on my own and keep track of transactions and how to deposit and withdraw and fill bank forms which I learnt here using enrich that helped me gaining confidence to access bank.

I have made my mother learn how to handle different documents and how to deposit and withdraw money from the bank. Earlier she didn't need to do all this. Everything was being taken care by my father though he was not educated. My father had kept an accountant for this purpose. But now I am the one who has replaced my father's position in matters of business activities. The reason I do not take control of finance so that the male members of the family(younger brother) do not feel threaten.

Now my association with centre helped me to become so powerful that not only often I guide my accountant in some of the matters but also visit to the clients in remote area along with my two sisters. My accountant says it to my family 'Aap ki yeh ladki bahut tez hai(this daughter of yours has come up very smart). If I would have had a computer of my own then I could have





done my accountant's job even. I still use this centre's facility for my own commercial purposes e.g writing letters to few govt. institutions and to my clients. If I would not have had come to this centre, and had not learnt computer, people would have still been thinking about me as a 'Ghareloo ladki'(Homely girl). But now, after getting this training and exposure, things have changed. Nobody, in my locality, thinks the same as they used to perceive my image earlier. This kind of response from the society gives me a sense of my being bold, smart, vocal, liberated and emancipated. Though, I want to learn more about computer but my preoccupation of handling my business doesn't allow me that much of time to fulfill many desires. Computer learning was my 'Shauk'(taste or inner desire) and now, it has become a habit, almost like an addiction.

*Fieldnotes from Seelampur researcher*

Similar stories come from an essay writing exercise amongst participants at YPSA. They were asked to write about the "Changes in you after coming to the centre". The researcher summarised the confidence theme in the following way:

None of the male users mentioned any change in them in terms of raised confidence while 'each & every single female user' has mentioned that one of their major changes has been this rise of confidence level.

'But among these changes the most significant change in me has been that previously I used to feel some kind of a fear to get out of the house alone & I used to feel diffidence after coming to the centre. But now there is not a bit of that previous fear in me. This is the biggest change in me.'

Just the point that they travel from their home to the centre by themselves itself has brought a significant change in their confidence level. The experience of getting out of home alone, walking on the streets alone, travelling by public vehicles alone & reaching the centre have given them the confidence that they have the ability of communicating physically like the men.

The other thing that worked to increase their confidence (again only the female) is the experience of being in a group & the experience of interacting with other people; especially boys. They previously have never been in a very mixed group atmosphere like this which helped to overcome their fear about being in groups. Both learning computer in the training room and cultural activities and gossiping in the other room has broken the ice in them that was formed all these years. The experience of sitting next to men without having to care about who is talking to whom or gossiping with men & everyone accepting it normally has grown the confidence in them.

*Fieldnotes from Sitakund researcher*

This account again combines quite a range of meanings and experiences of confidence-building. Given the opportunity to physically and socially enter into a mixed public space, the young women develop the capacity to move legitimately and without fear around their community, to express themselves to men and to authority figures, to express criticism, suggestions, gossip and fun, as well as express themselves through cultural forms such as singing, public debates (held at the centre), pictures and words (on the computer). At the same time, each of these steps, taken by a young Sitakund woman, is a direct challenge to traditional roles and norms, and usually represents a victory over family restrictions and attitudes.

Gender divisions have thus been challenged, as have other divisions,



The centre in Budikote has become symbolic of diverse energies. Young girls and boys talking, discussing the newspaper, working on a radio programme or on the computer together, even flirting. Many students confess that they would have never be able to be so 'free' in other spaces in the village. Children run about playing games on the computer or recording a song. They say that their teachers never let them use the computers so 'freely' like in Namma Dhvani. But more seriously, Namma Dhvani has been able to transcend not only gender restrictions but also more deeprooted caste and hierarchical divisions.

I was visiting Rama's 's house, who attends the computer training from Bomannahalli, a neighboring village. She is a teacher on leave, because she just had a baby and wanted to use her time learning computers 'to become a better teacher'. I noticed that Veena who comes from the same village for the same training led us to Rama's house but would not drink coffee from her house or even enter the house beyond the verandah. The same day during the training I saw them sitting next to each other.

*Fieldnotes from Namma Dhvani researcher*

Many of these experiences are common to a range of community organisations, such as self help groups, and in many of our projects it would be impossible to disentangle the empowerment effects of ICT centres from the impact of the organisations with which they were working. Nonetheless, ICTs and ICT centres also link to empowerment in some very specific ways:

Firstly, ICTs lend themselves to group work and projects, so that developing social and technical skills are interrelated. For example, ICT training generally involves working with and learning from other participants, and using media within social interactions:

However what has been more interesting is the method of training. Rajkumar, the computer faculty in ND insists on students conducting seminars and making presentation about what they study in class. For example, a presentation on PPT in any topic of interest in front of the class. This he says, will help them more because the students not only need to know about how to operate a computer but also to be able to talk properly and present themselves.

Maya, a twelfth grade student today looked very flushed after her computer class. I asked her what was wrong and she said that she had not spoken well in the class presentation because she forgot what she wanted to say. She said that in her college that she there is no opportunity to speak like this and that is why she was feeling so scared... she paused for a long time and I didn't know what to tell her. Then she said, "madam, I will do better next time"...

*Fieldnotes from Namma Dhvani researcher*

Secondly, ICT skills are directly and practically linked to literacy and expression. As discussed in the chapter on media content/innovation and use, participants rapidly demand or develop the opportunity to use computer drawing, digital cameras, sound recording and so on. In the case of radio and video, there is the additional ability to broadcast one's voice into a public domain: participants in Namma Dhvani can produce cassettes, or join in live broadcasts, that allow them to directly speak to their communities.

Thirdly, for many poor participants, mastering the computer or making a radio programme does not simply mean learning and using a new tool - it means appropriating as their own the most prestigious modern technologies, signifiers of a modernity that they previously felt to be completely unreachable.



They are not yet clear how ICTs are changing the nation, but they always say in modern life technology plays a major role in development and now Baduria made them the part of that.

*Fieldnotes from Nabanna researcher*

Today they do not feel left out when some body talks about computer. They can also be a part of the discussion.

*Fieldnotes from Darjeeling researcher*

The repeated stories of overcoming fears in order to use the mouse or organise files have both literal and symbolic meanings: they tell of both a real mastery of a technology and of new symbolic relationship to modern life.

Finally, this engagement with ICTs has a sometimes dramatic impact on participants' social standing in their homes or community. Being seen to master prestigious new technologies changes participants' relationships with others.

Now they have a say in their family. Their parents, husbands, in-laws and of course their siblings feel proud as they use the most sophisticated technical device. They are also admired because they are coming out of home to know good things and exchanging information with others. Some of them are now the part of the decision making unit in their family. They realised that women have the right to speak. In the society they have a distinct position as they know computer, they interact directly with outsiders like us as well as UNESCO visitors.

We can not say that within a year of ICT use the social hierarchy in Baduria has changed, but all that we can repeat about the married women who had no right to say anything, now can give their opinion in decision making. After coming to the centre and mixing with lot of women they have realised the have the right to speak.

*Fieldnotes from Nabanna researcher*

A key issue for poor communities is whether ICTs and ICT centres are 'for them'; conversely, access to ICTs - as modern technologies for educated people - may mean a change in their perception of their own status. In the following interview from Tansen, Nita was excluded by both poverty and caste from having ever watched television; the ICT centre designates it as 'her' technology for the first time:

**Nita** No sir I'm from very poor family and my father had to sell the cattle for my study, and in this condition how could I have such dream to see TV in my room.

**Researcher** But you can see TV in your house owner's room. Can't you?

**Nita** I can see it but I feel uneasy to go there. I'm always afraid to hear such words which are used for lower cast people. I can't tolerate it. Rich people don't care about our life and dignity. But some of them are nice

**Researcher** Is this your first time to see the TV?

**Nita** Yes, this is the first time. I've never seen the television in the houses but it is my great opportunity to see the TV set in the centre.

**Researcher** Tell me your experience about the TV before you've seen it?

**Nita**

I can never think about TV. I feel amazed here when I saw this set here. I only knew it when my friends called the name, and I can't think how the small people are inside the set.

*Interview notes from Tansen*

On the other hand, this transformation through their encounter with computers can be double edged:

Kanaka, 50 years old lady, a member of Nila SHG , Varakalpattu, had gone to the agricultural field to work as a coolie, after the two days computer training programme. A group of other workers called her loudly as "America! America! Computer! Computer! Why are you coming to the field?"

*Fieldnotes from Tamil Nadu researcher*

In fact, this quote expresses some of the contradictions of empowerment: the workers seemed to be dealing with the incongruity of a fellow coolie using computers by framing her new status in a teasing if not sarcastic way, with an outrageous nickname. Moreover, the idea that two days of computer training could transport her out of the field (to American-style office work?) seems to play with magical and unrealistic views of the transformative powers of new technologies. Similar tensions and contradictions arise within families as particular members are noted for their association with ICTs.

Being part of a computer centre organisation gives a specific community role, especially for staff and volunteers:

I wanted to make a programme on the role of police in keeping a community safe, and the basic laws that people should be aware of. I went to Kamasamudram to interview the Sub Inspector of Police and the respect and attention I got from him was very nice... he even cancelled his appointment to speak to me and dropped me back home. I would have never been able to do this if I were a common citizen.

*From Namma Dhvani*

During the BLCC meeting the director of the BWDA (NGO), called Renuka [the SHG leader] as 'Computer Madam' and asked about her experience with computer and interest with others. They also gained dignity and respect from the local people and other groups.

*From Tamil Nadu - Cuddalore*

In another similar example (from Nabanna), staff at the local bank heard about the 'Computer didi' and asked to be trained in ICTs, a dramatic reversal of hierarchies.

An important aspect of this change in social status is the position of project staff as role models. In numerous cases, staff represent and embody a different educational, class, caste and gender status that amongst other things simply proves to participants that another way of doing things is possible. Participants frequently said that they wanted to be like the centre staff, and used examples from their practice to think through changes in their social status:





Father of a participant asked us about our academic qualification. When it was a master degree he was convinced but as I told about management course he was very curious to know who is eligible for this kind of a course. Then he told his son that he should see us and understand the value of education.

*Fieldnotes from Nabanna researcher*

**Mother** This area is very backward.

**Researcher** How?

**Mother** Like my other daughter teaches in a private school being run by an NGO. So she is supposed to go out and conduct a survey but the people in my neighborhood do not like it and complain to me that I should not send my daughter out to do the survey. She also hesitated. I want them to become bold like you [the researcher]. How freely you keep moving in the lanes.

**Researcher** How do you know?

**Mother** My daughters told me that you go out for field work.

*Interview with mother of participant, Seelampur*

The links between ICTs and empowerment, as we have seen, are diverse and combine both actual skills and (social and technical) confidence, as well as more new understandings (on the part of both participants and those around them) of their status, possibilities and value.

## Information And Voice

Another aspect of empowerment concerns the role of information itself in expanding participants' sense of their own social and political agency. People place issues of powerlessness at the centre of their definitions of poverty, above all lack of voice and inability to access the basic information and facilities that might improve their conditions. This includes specific kinds of information needs such as basic health information and facilities that would prevent the illnesses that are central to reproducing poverty through unemployment and debt. People feel that the cost of being uninformed or uneducated is itself very high, including being cheated and being unable to access grants and other benefits. At the same time the cost of information can be highest for poor people: applying for jobs, for educational courses or examinations and for basic utilities may require fees or bribes. Information, which should be freely available by right, may have a high cost. Public participation as well as protest requires both means and confidence, while poor people often feel that governments - despite promises - have no interest in listening to or helping their communities:

They told us that there was mayor of XXXX municipality who provided them the land 7/8 years before. I asked who is there in Municipality nowadays. They told us that they don't know who is there in municipality now. They also told me that it never helped them, whoever was in the post. According to them the officers never give responses to them.

*Fieldnotes from Tansen researcher*

Purnima, a lower caste member of the community, was bereaved at the loss of her only cow, also her only means of earning. She had taken out an insurance policy, but was unaware that she could claim insurance for her dead cow until she heard one of Namma Dhvani's programmes on insurance. The Jagruthi resource centre helped her further in claiming her insurance amounting to about Rs. 10,000.

*Fieldnotes from Namma Dhvani researcher*



The very idea of free information as a right, and one within the grasp of poor people, is a major and empowering issue, over and above any single piece of information that might benefit them. The same applies to communication needs. The stories most proudly told are about developing the confidence to walk into bank offices or panchayats to demand information or voice issues. ICTs as means of access to information may be only one element of developing this attitude, though an important one. Equally important is the connection between ICTs and the centre itself (what kind of place is it?) and the support groups around it (such as SHGs or information groups or Knowledge Societies).

In all these respects, both information itself and the participant's belief in their right to information increase their ability to make demands and negotiate with authorities, to alter their bargaining capacity.

Some say that the ICT has given them a chance to voice their opinion. I remember one of the users talking about filing the case against one of the computer institutes. This happened after she came to know about the consumer rights in one of the awareness programme.

*Fieldnotes from Darjeeling researcher*

In Namma Dhwani there is an increasing demand for two kind of programmes. One about indigenous domestic medicine and the other about womens health. In particular women find the phone-in with the doctors as the most useful. The primary reason apart from the information itself is the attention that is paid to their health. Says Kamakshi "If I am suffering from body ache or anything else and have decided to stay back at home, my husband is angry with me and does not speak to me. At the same time if he has a small common cold, he will ask for so many things and go to the doctor. If I go the doctor it is seen as a waste of money, if he goes it is seen as necessary".

*Fieldnotes from Namma Dhwani researcher*

UCR provides many examples of programme formats where people in estate communities or other remote areas have not only received or publicised information that challenges authorities over local issues - they have also directly challenged the authorities themselves. These programmes often take the form of 'ambushing' politicians: inviting them to events or telephone interviews where they do not expect to be directly addressed about specific local issues, and called to account for their inaction. In some areas this has led to local people being able to say to authorities, 'if you don't act, we'll tell the radio', and this has become a significant threat. In one example, a communicator was walking down the road into a town late in the morning and kept coming across teachers meandering, very late, towards school. He recorded each of his conversations with them out of which he constructed a programme about absentee teachers. Threat of future shaming programmes continues to act as a useful bargaining tool to improve education in this area.

Empowerment is not always based on specific pieces of ICT accessed information but on enlisting the support of the ICT initiative as a wider information service. In Baduria, during an information group meeting, a woman who was not a member asked for help. She was involved in various income generating activities in which she had tried (unsuccessfully) to involve local women. She knew of some government grants that could subsidise some of these activities but had so far been defeated by the web of government offices, forms and bureaucrats she had to negotiate, and by the refusal of officials to attend to a poor and illiterate rural woman. What she needed, she said, was an educated person who could both help her navigate these procedures and who could make the officials take her case seriously. She associated both Nabanna and its staff with this kind of bargaining power.

In this context, some of the most empowering ICT interventions were also some of the simplest. For example, workers in two of the Darjeeling projects gradually began to see their centres as information



exchanges, rather than ICT centres: people valued them as places where ideas and information are accessed and exchanged through numerous channels - face to face interaction, print media, computers, public displays. The staff have set up bulletin boards with simple practical information - job opportunities, contact numbers for local doctors and schools, HIV/AIDS awareness, training in stuffed-toy production and legal advice. More than providing useful information, the very idea that information about jobs and health can be public, transparent and free is regarded as liberating and exciting.

Similarly, in Seelampur, a simple list of reliable doctors, with addresses and phone numbers, was one of the most useful, and symbolic, interventions. Namma Dhvani pursued initiatives to make the Panchayat more transparent and accessible by investigating and broadcasting about their finances and proceedings.

The ability to create content which is viewed, read or listened to by others, the sense of achievement, the feeling of having a voice, and the response from those around them are strong indications of the empowerment many participants have experienced through content creation elements of the initiatives - especially those that have this as a core element in their activities. Reema, a student who has recently finished the training course at the CMC in Tansen has been making programmes for the past three months. The 'Local Programme' is telecast once a week on a cable network. This is an entry in her diary, that the CMC encourages students to keep:

Today is very important day in my life because today our programme was going to telecast through local T.V. We had worked very hard to make the programme entitled "Jeevanko Goreto" (Path of Life). It is the informative programme giving information about the different skills which people are using to earn their life. Our Mahesh Sir has told us that this programme will be telecasted on Saturday at 6.00 pm. I was very excited to see that programme on T.V. so at 6.00 pm, I switched on T.V. and I called all my family members to watch the programme. After a while the programme was started. When I saw our programme on T.V., I was so happy that I couldn't express it. I had never thought that I will be able to make such a programme and I will be seen on T.V. When the programme had been shown, there were many guests in my home. They also watched the programme and they were very much surprised to see me on the screen. They began to ask many more questions to me. They were very much interested to know how it was possible. I told them every thing about CMC, our trainings and about local T.V. They became very happy to know all the things and they praised me for this and wished for my success.

On the way, I met one of my friends and she also congratulated me for my work and said that I had done a very good job. She inspired me to do many programmes like that. Not only that even small children in my neighbour had watched that programme, they told me that they had seen me on T.V. and asked that when I was doing my next programme.

Our Mahesh Sir also inspired us to make more programmes so that we will be able to gain more experiences. It took about two and half months to make this programme. Our team work was not so good that's why it took a long time. Each and every work just like narration, editing, camera etc. had been divided to each friends but nobody did their job properly. Mostly problems seen in the part of camera shooting and editing because nobody was ready to do these works in our team. So I requested one friend who was not in our team to help in editing part and I also helped him. In this way, we completed the programme. I felt very difficult to make this programme mostly in editing part but I hope next time it will not be same. It will be easier. I think that the most important thing to make a programme is team spirit. If the team spirit is good then we can easily make any programme.

## Negotiating Change

Although participants generally described increases in their confidence and in their opportunities and aspirations, they also had to deal with considerable tensions.



Empowerment is not a 'condition' that is achieved; it is a process with advances and reverses. For example, in rural Tamil Nadu, one of the most dramatic examples of empowerment led to enormous tensions within the self help group itself. Meenakshi (referred to earlier, in chapter 2) had been abandoned by her husband in her daughter's first year and had been separated from him for over ten years. She is illiterate and supports herself through daily agricultural labour or road works, investing much of her income in her daughter's education. She threw herself (and her daughter) into the ICT centre, she not only identified closely with it but also rapidly developed a range of skills and capabilities. She has a very original visual sense, expressed in both digital photography and in computer drawings; she is keen to develop literacy through computer aided training courses; and she is adept at mastering technical processes, as we saw earlier.

What the researcher - and Meenakshi- saw as a significant process of empowerment was interpreted rather differently within the group. The trainer was the college educated daughter of the SHG leader, who was also the leader of the entire SHG federation in the village. They were not happy to be shown up by a newly 'empowered' illiterate woman of dubious caste and marital status. Tensions increased with accusations that Meenakshi was dominating the centre and that there were financial irregularities. Meenakshi was excluded from the centre for several months (as was her daughter initially).

Similar issues arise within more formal structures as participants with more confidence and skills take on leadership roles within centres. Centres obviously depend upon training up capable members who have a strong sense of ownership and responsibility. In Seelampur, several women were obvious candidates from the very beginning of the project. As they were more formally incorporated within the management structure of Seelampur, tensions arose with the male manager of the centre and his (male) replacement and protégé. This led to running but covert battles waged by not passing on crucial information or by spreading rumours:

Salim [the manager] has reasons to be critical of Sheena's initiative since Mumtaz and Rehaana have been emerging as role models for other women as well. He has been noticing Mumtaz's and Rehaana's progressive and positive attitude: other women now come and talk about their problems with them unlike earlier when women would wait for me to discuss every single thing. This fact Salim is not able to digest nor able to accept their popularity . I wonder if it is due to his superiority complex or due to traditional gender outlook, though during my discussion he always pretended to be a very open minded person.

*Fieldnotes from Seelampur researcher*

This tension extended to Salim's discomfort with more informal teaching approaches and ICT activities, despite his ostensible support. These were precisely the activities that the women most closely associated with empowerment were initiating.

In cases where the entire initiative depends on trained and committed volunteers from the community, empowerment can result in complex power struggles as participants come to terms with their enlarged sphere of action:

Divya epitomises Namma Dhvani today for many people. From her humble beginnings when officials from





All India Radio described her as a 'silent scared girl', her transformation to a courageous dynamic inspiring woman has been phenomenal. However this transformation brought with it a sense of power that at times did not contribute to team building and sometimes even thwarted progress of the centre to cater to an extended audience.

In one particular instance she had decided to quit and the reasons for this came out in an interview later with the researcher: "We were all talking about leaving because we wanted better paying jobs and I was influenced by my colleagues' decision." However when unable to find another job she wanted to take back her decision, and this reversal came under review. At that time, for fear of losing her job she gathered community sympathy and support using ways and means that were detrimental to the centre's existence in Budikote. The situation became grave when the researcher was physically threatened by community members in the presence of Divya. At Namma Dhwani I observed exactly how empowerment led to dissent that could have caused serious harm to the future of the initiative.

*Fieldnotes from Namma Dhwani researcher*

In Seelampur there are many examples of increased confidence and the centre provides the only space in which these young women can socialise and be creative, search for information and learn new skills. However, as a result of learning to use computers, some of the women have had increased dowry demands from prospective marriage partners. Whereas previously a sewing machine would be an expected component of the dowry, now the future in-laws were demanding computers. In other cases marriage proposals have been withdrawn. These are serious consequences of attendance at the centre and ways of militating against this are being developed - one idea is to provide computer training to young men also. It is understood that in the context of these young women's and their families lives, marriage is a rite of passage that is central to their life course. It is understood to be a long-term process that needs careful monitoring, ensuring that the situations of the marginalised and vulnerable are not worsened unintentionally.

Empowerment is often a carefully negotiated process, a matter of finding free and legitimate openings within social relationships. For example: Asma was employed by the Seelampur project to teach tailoring classes and was one of the most active participants in the centre. Although her mother was relatively liberal, she would not allow her daughter to take paid employment and prohibited Asma from receiving a wage from Seelampur. Sarita told her that this money was not a wage but a token of appreciation for the labour she had donated to the centre. This was acceptable and allowed Asma to take a central role in many aspects of the centre.

## Summary Of Key Findings

'Empowerment' as it is experienced in the initiatives refers broadly to the challenging of social norms, shifts in power relations, voice and expression, a sense of rights, an increase in perceived opportunity, and increases in 'confidence' and the consequences that arise from this. Empowerment therefore has wide and often locally specific meanings; indicators of empowerment must be equally flexible and responsive. It is important to investigate the often subtle and very indirect ways in which ICT projects have developed confidence and capabilities, especially as they make it more likely that more tangible or measurable outcomes will follow in time.

ICTs link to empowerment in extremely diverse ways. For many poor participants, mastering the computer or making a radio programme does not simply mean learning and using a new tool. As pointed out before, it means appropriating as their own the most prestigious modern technologies,



signifiers of a modernity that they previously felt to be completely out of their reach. Similarly, engagement with ICTs has a sometimes dramatic impact on participants' social standing in their homes or community, an impact that may be out of all proportion to their practical use of the technologies.

ICT skills do have direct and practical links to aspects of empowerment such as literacy, voice and expression, and access to information. Nonetheless some of the most compelling expressions of empowerment arise from the way in which social and technical skills are interrelated through group work and projects, and through the free social interaction and networking experienced in the initiatives. The combination of social and technical confidence often results in participants coming to new understandings of their status, opportunities and value.

However, we have also been concerned to understand that, as a process of personal and social change, empowerment is contradictory and a negotiated process that can involve losses as well as gains, and power contests that can threaten both participants and initiatives.



## 6 SOCIAL NETWORKS

**S**ocial exclusion is a major indicator of poverty as well as playing a central role in its reproduction. Inclusion in social networks provides vital access to information, social support, confidence and the ability to participate in collective life. Poorer people have fewer and narrower social connections, excluded by their conditions from the very social resources which might improve them.

Investigating social networks means studying 'who is connected to whom?' What is the social and geographical range of people's connections? At what points and for what reasons are people excluded and prevented from making connections with others? How do people use their connections? Social networks are also part of understanding the flow of communications within communities and therefore the ways in which ICT projects connect to the community: how is information circulated? How do projects relate to existing social networks and to what extent are they accepted within the community?

What has emerged most strongly from the research experience has been the effectiveness of the ICT centres in expanding users' social networks. They do this in many ways.

- They provide legitimate spaces to socialise and work with different people, and in free and interesting situations.
- The centres act as 'hubs' where different social networks can intersect - e.g., friendship networks across educational, religious, caste or gender divisions.

- Participation in ICT centres builds the confidence and skills to deal with new people and situations.
- Centres are connected to larger organisations, and attract visitors, giving a sense that the locale is connected to a wider world.

All of these elements create new and different flows of information and communication, often between people who have not previously been in social contact, as well as opening up restricted social information networks to wider sources of information and larger networks of people to communicate with.

The ICTs have helped the users in networking within and outside the centre. It is because of ICTs that all the users in the centre have come to know each other. Everybody was a stranger before the ICT centre was set up. Now they are not only friends but exchange their ideas and support each other. The ideas are further taken into their locality and shared among their friends. They have become conscious of their rights, duties. Have become innovative and creative.

*Fieldnotes from Darjeeling researcher*

## Young Women In Seelampur And Sitakund

The role of social networks in project development and research is clear if we consider a relatively extreme case of social exclusion: female participants.

One interviewee at the Seelampur initiative repeatedly expressed a view of women's proper place:

You westerners always say that we restrict our women and prevent their development. This is not true. We encourage their education. And they are entirely free, within the four walls of their room.

Our women are precious. You would not leave your jewels lying on the street. We will not expose our women to danger.

*Fieldnotes from Seelampur researcher*

Women were severely restricted in their mobility and therefore in their ability to participate in any social networks beyond their immediate family. Young women said that they had never had a friend prior to coming to the Seelampur centre; YPSA women had rarely before interacted with men outside the home.

We don't go to meet people like friends often. We keep ourselves occupied in the household work. Our husbands, brothers and father do not like our going out much. Very rarely we go to theatre with our family members only. Most common social gathering where we can go unrestricted is the 'QURAN KHANI'. It is purely a religious function. It is not common in our culture for women and men to participate together even in religious functions.

*Fieldnotes from Seelampur researcher*

Religious events like the Quran Khani are amongst the limited number of social gatherings that are considered 'safe' for women. Public streets and buildings are portrayed as places of intense sexual danger from teasing or molestation; these dangers are both real and constantly invoked in order to regulate women's mobility. Conversely, being spotted in a street incurs disrepute for exposing oneself to dangers, to gossip and to accusations of being up to no good. 'Social mapping' exercises were conducted in Sitakund in which mixed groups of young people drew maps of their villages



and identified resources such as mobile phones and schools. In order to participate, the girls often visited parts of the small village, only a few minutes walk from their homes, but which they had never before seen. In a group discussion, the girls explored the map in terms of safe and unsafe areas, how far they could move from their homes and why. Unsafe areas included crossing the main road to attend the school from which they had dropped out, as well as any areas with shops or where men gathered. The following is from an interview with a young village woman in Sitakund who spent most of her day doing domestic work and handicrafts at home:

**Researcher** How often do you go outside?

**Nikhat** I don't go outside.

**Researcher** Then how do you get the materials?

**Nikhat** My sister's husband brings them for me.

**Researcher** Don't you go outside for personal shopping?

**Nikhat** No.

**Researcher** Who does the daily marketing?

**Nikhat** Sometimes my father. Other times my sister's husband. They live in the house behind ours.

**Researcher** What about your father?

**Nikhat** He has become too old. Can't really travel to Sitakund often to do shopping. Sometimes he does the shopping. But if asked to bring the materials, he forgets.

**Researcher** How do you keep communication with your relatives?

**Nikhat** All our relatives live in the nearby villages. So we often hear of them. Father or my sister's husband communicates if needed.

**Researcher** Do you write letters to your relatives?

**Nikhat** No. I never need to.

**Researcher** Do you go to visit your relatives?

**Nikhat** No. Only go to my grandfather's house twice a year.

**Researcher** How do you get information about what's happening in Sitakund or other places?

**Nikhat** The men travel to places & I can hear about what's going on outside when they discuss these things after returning home from their workplace.

*Interview notes from Sitakund*

Restricted mobility produces restricted social networks for information, support and interaction; it also involves very material reliance on others' social networks from which one is excluded:

We make purse, sarees. Only do embroidery; rest of the work is done by others. We get designs, size and sample everything. We do not keep sample, the retailer brings sample and fabric with him. We do only filling. We do not know about market price, what ever suits them they pay us . we are paid only for our labour work.

It is only the old associates of my husband who keeps getting us work. None of us ever go out of our home for work. Have never seen even shops where these pieces are sold. Since I am a widow living with my young daughters, I do not allow any other unknown customer/people to visit us. Do not let any one enter the room, take work from outside. Allowing any stranger means inviting disrepute in society.

But we were told it is mostly foreigners who purchase. Last time I made a purse for USA. We do not have any idea of rates. It is buyer who decides rates and pays whatever suits him.

*Interview with participant's mother, Seelampur*

This exclusion from social and commercial networks, on the basis of gender restrictions on mobility, was repeated in many project communities, including non-Muslim households. For example, in both Namma Dhvani and several of the Tamil Nadu projects there was a clear distinction between women who were in self help groups and those who were not, or between life before and after joining an SHG. Outside of self help groups, women were generally restricted to the immediate family, a few neighbours and some extended family, living and working in considerable isolation. Many have married into their villages and their only connection to wider social networks are very occasional visits to their place of origin. Joining a self help group, and in these cases, by extension, an ICT project, immediately expands the social networks by which they are connected not only to other members but also to committees and gatherings of other SHGs, to bank and government offices with which they have to deal and sometimes to the partner organisations and NGOs that the SHGs and ICT projects are connected to.

## ICTs And Social Networks

Restricted social networks reflect social norms that narrow people's mobility, access to information and resources, and their ability to interact with others to gain support and to organise collectively. Conversely, interventions that expand social networks challenge the social norms - such as gender roles and caste exclusions - that restrict people's mobility and social connections.

Firstly, ICT centres are social centres: whatever else they do in the way of resource and skills access, they are places where people can meet, interact, work together and exchange information. That is to say, they are places in which people network, and they create new networks as well as building on existing ones. Above all, ICT centres are open access spaces in which people from diverse backgrounds meet and interact, in principle unrestricted by gender, caste, poverty and ethnicity. They therefore act as hubs where different social networks are brought into contact, both potentially overcoming some exclusions and allowing for new social configurations.

YPSA provides a good example of how ICT centres, operating as social centres, interact with and construct social networks. The centre comprises two rooms: a computer room and a library and meeting room, opened later, which has become a kind of 'cultural centre'. The project worker and researcher had felt from the beginning that one of the things that most excited the participants about the computer centre was the social mix, in a free and liberal environment. It was one of the few

places where young people of both sexes could meet freely, working and socialising together; and including people from diverse backgrounds (particularly both Muslims and Hindus). For many girls, it was the first time that they had been able to enter a public place and interact with strangers. This interaction led directly from computer skills to the full range of their common interests, generating many ideas and relationships along the way. For example, girls and boys started impromptu cultural events involving playing music and singing, and reciting poetry. These events and social groupings themselves built on earlier forms of social networks - culture clubs and youth groups which had previously been entirely single sex, and often dependent on unreliable meeting places.

The researcher built on this development by opening up the second meeting room at the centre for public access:

The users were given full freedom to spend time in the other room the whole day until the centre closes. So the users started to use the room to meet & gossip. They would often turn up one or half hour before their class time & spend time in the other room. The girls seemed to be the most benefited in this matter as they have the least opportunity to spend time outside their house & socialize. They don't have much scope to meet their friends too often & gossip, especially not male friends of collage or private. Neither is it possible in the public places like shops. It is not possible in other places like collage or private coaching centre where boys & girls study together because there they have to maintain a high degree of distance from others because of social norms. So they can't often make friends. So they enjoy coming & using the other room.

Discussion with some of the users revealed the following reasons for the popularity of the other room. These are -

- a) The other room is inside the office where no people from outside can gaze. So it gives them the feeling of privacy that they don't get in other places.
- b) They are allowed to gossip, read or sing the whole day. This is allowed nowhere else but here.
- c) No one cares if a boy & a girl is sitting side by side & gossiping here which is also not possible anywhere else.
- d) They always see other YPSA staffs whom they know from long before coming here. This gives them an added sense of security as well to their parents.

They would often bring their friends to the centre to show them that they are able to operate digital tools that they can't. Also to show how many friends they have here & to get them introduced to the other friends. Their friends also express interest to come to the centre after listening to the stories from the user friends & after seeing the centre atmosphere. In fact a number of the new users of the centre got admitted this way.

*Fieldnotes from Sitakund researcher*

The centre mixed young people of different genders, ethnic communities and poverty levels, allowing for relationships and informal organisations that crossed these lines. This also created tensions and dangers. A considerable range of norms and prohibitions were more or less explicitly challenged, and the project worker sometimes seemed to be walking a tightrope in terms of how liberal a policy was possible. For example, young men and women could socialise and work together freely, but it would take only one scandal, or rumour, to launch both the



centre and YPSA into a crisis. Similarly, mixing of Hindus and Muslims, or inclusion of disabled people, was generally relaxed, but these divisions could easily re-emerge: for example, when one Muslim participant felt aggrieved over access to the computers and over the project worker's perceived attitude to him, he immediately reached for racist accusations about minorities (Hindus). It was notable that while people in most project communities claimed that mixing across caste and ethnic lines was taken for granted, these divisions were always available to be used in times of conflict.

While much literature has focused on how ICTs expand mediated information access and communication, much of the ictPR experience points in the opposite direction: ICT access produced increased face-to-face communication within local social networks. This follows directly from the way ICT initiatives functioned as social centres: they provided activities, interactions and attitudes that promoted more local communication. Conversely, it is largely through face to face communication within local social networks that news about the centre spreads, attracting more participants but also embedding the centre more organically in the community.

For example, the Nabanna initiative has constructed a large social network in the form of its information groups. These build on diverse local networks (such as affinity groups) but link them to the wider network of other information groups, ICT centres and the even wider readership of the Nabanna newsletter. These information groups are activated largely through face to face meetings and around particular projects (e.g., the newsletter or research-driven group discussions). Though often motivated initially by the desire for computer training, what has actually developed is a social network that is not particularly mediated through ICTs, but which incorporates ICTs within intensified local social interactions. Moreover, these new networks are connected to much wider networks of women and families so that information and ideas can circulate much more extensively than before. At the most simple level, news about Nabanna as an information resource in the most general sense has clearly spread throughout the community.

In projects such as Tamil Nadu and Namma Dhwani that are built on existing self help groups, the ICT activities provided another layer of activity that boosted participants' interest and organising capacity. For example, leaders of two of the Tamil Nadu self help groups describe the range of discussions prompted by the activities of the ICT centres:

We usually met once in a week but now the members of our SHG are visiting me now and then. Some are interested to draw kolam and to practice to write their names in colour. But some are visiting me three or four times a day out of curiosity; two are coming regularly to help to clean the computer room. The purpose for visiting me may vary but the interaction between us increased. When we meet we mostly talk about money, savings, interests, loan, but now we begin to share our experience with computer-failure and success, family matter, income generating activities ...After the heavy field work, we sit before TV before the arrival of computer centre. But I have changed my mind set. Now if we have free time during the day we are coming to the centre. We are talking laughing, watching what others are doing in the computer. Even some time we are fighting. It become a meeting place for us. Our level of discussion is also increased.

*Fieldnotes from Tamil Nadu researcher*

Members used to attend meetings once in a week for sangam related activities. Now it has become a meeting place for the members. Members are sharing their family matters, criticism about TV serials, health related issues, news etc. Vaideki spent her evening time in information centre. She does not have TV. She does not have the habit to go to other houses to watch TV. Nowadays she is spending her leisure time in information center.

*Fieldnotes from Tamil Nadu researcher*



It is also interesting to note that people in a number of project communities made strong contrasts between the passivity and isolation of television watching on the one hand and the active and social character of radio, video and computer use.

News from and about the centres is a topic of conversation. Participants talk to family and friends about what is happening there, what they have learned, who they have met. Young women have said that they now have something interesting to talk about in their homes, enhancing their status and feeling they have something valuable to contribute.

Priya a ten year old girl learned from me - paint, e-mail, browsing, CD writing playing music, down loading. She became the teacher of the Kandarakootai centre. Immediately she called her friends and taught them. Whoever visiting the centre, she says whatever she learned.

*Fieldnotes from Tamil Nadu researcher*

Participants frequently want to bring friends or siblings to the centre, integrating the centre further into their own social networks. Conversely, they often have to mobilise their networks this way in order to participate themselves: for example, in YPSA the participation of many girls was dependent on finding another girl, acceptable to their parents, to attend the computer classes with them. Once they had managed this, however, access was often opened up to other girls within their village networks, particular as the news spread. Similarly, in Tamil Nadu, Chitra brought her friends to the centre and got them interested in computers by playing music in Microsoft Media Player. In many projects, older people are mainly brought into participation through their children; and in general word of mouth has been the main way in which the centres have grown.

ICT projects are interventions that can reconfigure local social networks. Amongst other things ICT projects introduce scarce resources into poor communities and therefore into local competition for both status and material means. In the Tamil Nadu project, the self help groups that were given computers were already part of larger federations and other networks of existing self-help groups. The groups were selected on criteria that reflected both research concerns (e.g., poverty levels) and their responsiveness to income generation strategies. The original idea was that although particular SHGs would maintain the centres, they would bring resources to all the networked groups. In the rural Cuddalore groups this aroused animosity:

In Kandarakottai, there are two other SHGS functioning. They are more economically sound than our selected SHG. Bhanu (the SHG leader) and myself took initiative to bring them to the centre. But they refused to come. They expressed to some other member:

"The poor group has got computers and became very popular in our area. Even though we have more savings and started first in the village we were not able to get the computer. Why should we go there?"

On the one hand, giving the computer to one particular group divides the federation, out of jealousy. But on the other hand they are sending their children to learn computer. So it divides the SHGs and unites the children.

*Fieldnotes from Tamil Nadu researcher*

While the connections with the formal network (federation) became strained, the informal networking intensified. In Tamil Nadu's other rural group, which was experiencing the same issues at federation level, the children constituted a new communications network:

Sivakami expressed that as federation leader, I feel it is easy to communicate messages through the students. Children who are learning computer are acting as agents to pass the information from her to other Facilitators. When they are coming to the centre to learn or to play, she sends messages about meetings and or any message related to SHG. She also expressed that she receives the feed back too from the students.

*Fieldnotes from Tamil Nadu researcher*

In fact, projects often develop their most significant social networks through their most active participants, who are often those most able to mobilise social connections to spread the word and motivate new participants. These developments may cut across more formal organisations and networks. For example, UCR set up an elaborate system of Knowledge Societies to produce community radio and link the radio to the communities. One of the most effective Knowledge Societies, located in Umagombeda, near to the main studio, was organised by one woman who saw both radio and the society as a vehicle for networking a wide range of existing local organisations and groups into clearly targeted campaigns (e.g., for new roads and schools). Both making programmes, and listening to them broadcast, could directly give a sense of the importance and effectiveness of local initiatives, and could be linked to local events (marches and festivals) that connected local and non-local communication. At the same time, she was extremely impatient and angry about formal structures within local politics, the local community and UCR itself: to her, these all represent unproductive venues designed for 'those who just talk' and do nothing. She herself was concerned with active networking, mobilising local organisations, in relation to radio, around direct action.

Evidently, increased face to face interaction within social networks can be exclusive as well as inclusive. Although some of these examples indicate a smooth flow of information outwards from centre participants to friends and family, there are plenty of examples in which these flows are broken off by the limitations of these networks. In the Tamil Nadu case, it was clear that in some of the rural groups, the buzz around ICTs was being communicated amongst the children but not within families: the mothers were not interested or not able to understand what was going on (similar to their difficulty in dealing with the educational needs of their children) and the fathers had no connection whatsoever to any of these developments. Similarly, in Seelampur, Baduria and Sitakund, the extent to which families heard about or discussed ICTs or centres was very variable, from increasing involvement to complete lack of interest or hostility.

In addition to impacts on local social networks, ICT centres can play an important role in connecting people to wider social networks beyond immediate family, friends and local groups such as self help groups. These wider connections take the form of either direct interaction or a feeling of being more widely connected.

In Budikote, visits from students in Singapore and Bangalore where they lived and worked within the community inspired the volunteers to try newer forms of programming and cater to non-school going children but also helped them develop intimate relationships with the 'city friends'.

*Fieldnotes from Namma Dhwani researcher*

At the most practical level, participants are involved in activities that may bring them into direct connection with officials and organisations that previously seemed to inhabit a different, unconnected world. A particularly stunning example of this is provided by some of the Seelampur participants who actually had meetings with the Maulana to pursue ICT centre activities, to make demands and to negotiate with him and other Madrasa officials. Previously, the women had had no

direct contact with local religious authorities. In Budikote, linked SHG and ICT activities (the two are hard to distinguish), brought people into contact with bank officials and Panchayat members. As research showed, this had an impact on whether they felt connected to these institutions, in the sense of being able to deal directly with them.

At a more general level, through their participation in ICT centres people seemed to feel more linked to 'the wider world'. As we have stressed elsewhere, ICTs are perceived as central to modern life; access to them is widely interpreted as being personally connected to this modern world. Even their presence in the community is understood as linking an excluded locality to the rest of the world, symbolically if not practically. This was often concretised in comments about the foreign and prestigious people who visit the centres and therefore the communities, including UNESCO team workers and the research support team. These visits, as events, made manifest the place of these centres within social networks that connected villages to national and international bodies.

Finally, the media technologies themselves reconfigure people's sense of their place in wider networks. For example, this is clearest in the cases of UCR, Namma Dhwani and Tansen, where access to radio and video studios meant crossing over the line between consumer of mass media to participation in these media.

## Summary Of Key Findings

Communities comprise complex social networks, with equally complex and consequential inclusions and exclusions. They already contain flows of information and communication, as well as blockages to those flows. ICT initiatives can understand their interventions in the community in terms of how they connect to these social networks, and how they reconfigure them or create new ones.

The ictPR initiatives and research clearly show the capacity of such interventions both to enlist and expand existing networks, and to bring diverse and excluded people within a common social space. This can expand the flow of information and communication as well the individual's confidence and capacity to benefit from wider social networks. This has been particularly dramatic in the experience of many women participants, who could move rapidly from a restricted domestic sphere to connections with other men and women in ICT centres, to local organisations and to public spaces. Moreover, ICT centres have shown a considerable capacity to overcome ethnic, religious and caste barriers. In these respects, ICTs have been as important as a social medium as they have been as a technical one.

The further task is not only to overcome social restrictions and build information flows through wider networks, but also to strengthen the capacities and resources of these networks. This can take various forms: developing networks into more formal or stable organisations; building specific capacities (such as income generating skills or administrative and accounting skills), helping develop local content creation that both gives these networks a voice and specifically needed information.





As in all other aspects of ictPR, this has proven to be a gradual process that works best when it develops organically from both community demands and careful research, and has generally taken the form of small scale experiments and learning experiences. For example, YPSA slowly recognised the importance of its culture clubs as local youth networks, and helped develop and integrate them through often simple means: providing a room, staging events, employing them as local researchers. Similarly, Seelampur gradually developed a small scale programme of craft production and marketing that built on new social relationships developed in the centre, and support through careful training and through enlisting external experts, until they were ready to market their products in a large public trade fair.



# 7

## EMBEDDING ICT PROJECTS IN COMMUNITIES

All the projects aim to be community organisations, embedded in local social networks and organisations. By 'embeddedness', we are pointing to such elements as the sense of community ownership and valuing of projects; their integration with local organisations as well as informal networks; the extent to which they are perceived and used as local organisations with local participation. Understanding the conditions for achieving embeddedness involves analysing the different organisational structures that were explored by ictPR projects as well as the more informal connections to the community that emerged over time.

The ictPR projects explored different models for working with local communities and community organisations, including different arrangements with partner organisations, different management and participation structures and different connections to local organisations and users. This diversity was further complicated by different scales of operation, different local political and social conditions and different local histories. This makes generalisation complicated but not impossible: a central lesson to be drawn from across ictPR is the need to use research and experience consistently to make organisational structures responsive to the complex web of developments that actually unfold over the life of a project.

### Local Users And Local Organisations

One simple distinction between the projects concerns the way in which they have structured their relationship to users and participants: some have based themselves primarily on existing community groups such as self-help groups; some have established new user organisations (e.g., knowledge societies, information groups); and others related to users (at least initially) largely as individuals.



It is clear however that formal organisational models do not capture the diverse experiences and developments of the ictPR initiatives: Organisational models that were initially fairly similar often worked out very differently in different local circumstances; and all the initiatives have evolved into more hybrid structures as they have responded to local developments. This underlines the need for continuous research and reflection: the groups have needed to adapt their organisations to the actual community demands and processes they have encountered. In particular, ICTs mobilise new and different constituencies, as well as new ideas and ways of working, that often set them apart from existing local organisations.

Two groups (Namma Dhvani and Tamil Nadu) were tightly integrated with well established women's self help groups. Namma Dhvani incorporated the SHGs within their management committee, and worked with them to generate programmes, increase radio audience and mobilise volunteers. Tamil Nadu set up their ICT centres in the houses of SHG members, with each SHG taking responsibility for running the centres as community resources. This approach provided both projects with articulate and experienced women with deep knowledge of both local problems and ways of working. Three issues stand out: Firstly, this approach certainly did not guarantee participation or a sense of community ownership. Both initiatives needed to work hard to convert formal association into active participation, constantly needing to demonstrate the benefits of involvement with ICTs. In several cases, active participation came largely from non-organised members of the community rather than from the SHGs themselves: volunteers in the case of Namma Dhvani, and in several Tamil Nadu groups local youngsters who may or may not be connected to SHG group members.

Namma Dhvani found that although the knowledge and commitment of SHG members of their management committee has considerably increased in the three years of its existence, lack of basic organisational and practical skills, and lack of time and interest mean that it is difficult to imagine these members managing and sustaining the centre on a day to day basis, particularly as a non-profit organisation.

Secondly, as discussed elsewhere, working with existing SHGs means giving resource access to groups that are already embedded in complicated social networks, including relations of patronage and politics. The ICT initiative changes the local power and prestige of local groups, which can also act as lightning conductors for tensions around the initiative.

Thirdly, organised groups do not include the whole community. Namma Dhvani found that the 'non-organised' poor of Budikote and outlying villages included most Muslim women, as well as those of lower caste and, of course, men. Ironically - given that Budikote is the birthplace of Hyder Ali, an eighteenth century Muslim ruler and commander - Muslims were the least visible members of the community, geographically located on the periphery, attending different schools and not well represented in community based organisations. The initiative therefore had to move outside the circle of SHGs, by introducing programmes in Urdu and about the lives and culture of the Muslim community, and by enrolling Muslim children and youth as volunteers and in computer classes. Most community members who were not members of SHGs wanted to be in some form of organisation, both seeing the benefits as well as feeling excluded. As a result, Namma Dhvani began exploring setting up listeners' groups, as well as including men's groups based on water projects established by their partner MYRADA. On the other hand, from discussion and interviews it was evident that the main obstacle to participation (and in some cases even listening to the community radio) were the men in their households who felt threatened if their women were part of any social organisation that required for them to be interactive or even trained by NGO's.

In all three respects, both groups to some extent moved outwards from their SHG base, building on the more informal and non-organised clusters of interested people that emerged, in particular young people. In the case of Namma Dhwani, this took the form of a large group of volunteers who developed a range of radio and computer skills and participated in programme making, liaising with the project through studio managers (also local people) and project coordinators. Working with both studio managers and volunteers represented a large investment of time and energy in people who were central to the operation and identity of the project, as well its embeddedness in the community. However, during two periods of crisis over the centre (the theft of a camera, and disputes over one of the studio managers), both volunteers and studio managers were painfully split in their loyalties between the new social networks around the ICT centre and local family, political and SHG networks.

In contrast, Nabanna and UCR formed new groups specifically to anchor the ICT projects in the community. Nabanna trained a small group of 'direct beneficiaries' who were closely involved in the project (computing and newsletter as well as diary writing and other research activities); these women set up or led 'information groups' of women in their community, who would eventually have full access to ICT centres as these were set up in their area. In general this approach has been highly successful in spreading the word about Nabanna as well as understanding of its aims. It has also been remarkably successful in keeping interest and identification with Nabanna through regular meetings, visits from the staff and other information groups, as well as the small scale and slow, careful development of the project have kept people significantly involved. The regular Nabanna newsletter consolidates their constituency and gives a sense of identification and participation.

UCR had a highly trained community media staff of 20 (the 'communicators'), each responsible for one district of UVA province. The communicators worked with Knowledge Societies (for radio production) and IT Societies (to support the promised ICT centres). The KS and IT groups were to work with local people and groups, embedding the project in local networks and mobilising support, issues and radio production. Clearly the success of these groups depended on local initiative as well as the communicators', and the latter's ability to travel often long distances to keep a close connection with groups. Also, many groups went dormant because of frustrating delays in opening both radio and computing facilities. Moreover, the scale of the operation meant that there was little connection between the Knowledge Societies: they knew about each other largely through listening to their broadcasts or through occasional general meetings which some criticised as bureaucratic and meaningless (and patently unable to incorporate the community in helping to solve the larger problems of the project). Finally, there was some indication that because of the scale of the operation, Knowledge Societies could attract politically ambitious participants as leaders, who saw them as a platform.

The support groups set up by Nabanna and UCR had a formal structure (and in the case of UCR could involve very formal meetings, with officers, minutes and so on). However their success seemed to depend on bringing a generally interested public into organisations that were built on real local networks. In the case of Nabanna, the user groups had a character very similar to successful self help





groups, built on personal affinities and developed through close working relationships at regular meetings. In the case of UCR, the authentically active Knowledge Societies were organised around strong local personalities (a monk, a schoolteacher, a very dynamic local woman) who could involve existing local organisations and networks on a regular basis, largely by demonstrating the immediate impacts and benefits of the community radio idea. It is interesting that participants in these successful groups were very clear about which Knowledge Societies were purely formal entities and which were based on active participation. A major difference between Nabanna and UCR was the scale of operations (both geographical spread and size of population). It was partly the small size and localness of Nabanna that allowed its constructed groups to quickly develop a more organic character; the more successful UCR knowledge groups were notably those physically close to its base and in most frequent contact with it. Moreover, local people wanted to participate more directly in the radio (e.g., sing a song, read poetry, announce etc), but found that their participation was heavily mediated through the professional communicators.

Finally, YPSA, Darjeeling, Seelampur and Tansen did not initially organise user groups or work with existing ones (though all connected to other community organisations through meetings, publicity and - in the case of Darjeeling - a steering committee). In three of these cases, staff responded to the emergence of active users by developing at least informal structures. Seelampur set up a management structure to incorporate active volunteers more closely in the running of the project. The YPSA centre, as we have seen, developed as a 'cultural centre' which built upon local youth 'culture clubs', and offering them an alternative meeting space. In Darjeeling, each of the four centres had quite different characters depending on the constituencies that were most involved. In Ghoom the massive involvement of young children required staff to organise them, informally, in various ways; while in Kurseong there was a strong involvement of youth who were gradually brought more closely into the operation of the centre or in organising particular projects. In all of these projects, informal networks took on organisational structures to some degree and became strong linkages into the community.

Generalising across these experiences, it is clear that - whatever organisational plan they started from - all the groups are dealing with a complex mixture of existing social networks (formal and informal) and configurations of people (particularly youth) who are attracted specifically by ICTs. Their success depends on the one hand upon creating structures that bring enthusiastic users into flexible organisations that can be integrated into the workings of the centre, and on the other hand upon convincing existing groups that involvement with ICTs can be a relevant major involvement for them.

It could also be argued that cutting across these different organisational forms is the simple need to identify and integrate the most active, committed and enthusiastic local people; it matters less whether they are reached through existing groups, constructed ones or as individuals, given a formal role as volunteers and committee members or informal, integrated on a day to day basis.

## **Partner Organisations And Local Embeddedness**

The range of partner organisations had a major impact both on the character of the initiatives and on how they were embedded in their communities. Firstly, different partners contributed different skills and orientations, embedding the ictPR initiatives themselves in different larger projects. A clear divide was between those projects with media-oriented partner organisations (e.g., Namma Dhvani, Nabanna, Tansen) or technical partners (Seelampur, Tamil Nadu to a lesser extent) and those with a more purely development agenda (Tamil Nadu, YPSA, Darjeeling). It is clear that groups benefited

from being backed by partners with a more mixed technical, media and development experience (e.g., Namma Dhvani) both in terms of the ability to build on extensive knowledge of the community and to combine this with an understanding of the specific issues and aims of community media. The presence of technical partners turned out to be far more important than initially realised (see chapter 2): in the case of Seelampur, extensive technical backup went well beyond making equipment work; it also allowed for innovative uses of ICT that excited participants.

Secondly, development-oriented partners have understood the relation of media to community differently from more media oriented partners, and therefore had sometimes different concepts of how to embed them in their localities. Where the focus has been on development, partners have tended to take a more 'instrumentalist' approach to ICTs, seeing them as tools to learn specific skills, to provide informational resources for other initiatives or as vocational training. This contrasts with the approach we have been describing throughout in which ICTs have more indirect and unpredictable connections to poverty reduction processes. Especially when working with large and well established partners, ICT initiatives have had to negotiate with their own partners to help them understand the specific needs and dynamics of media work, and this can be a long and on-going process. An interesting example is provided by YPSA where the organisational culture, successfully developed over 20 years, depends upon highly professional and closely targeted initiatives focused on clear health, education, employment and awareness results. The organisational culture involves tight structuring and scheduling, and scrupulous (generally quantitative) monitoring and evaluation procedures. The looser processes and activities of the ICT centre were hard to integrate into this way of working, and many senior figures in YPSA initially saw the centre as essentially either a support facility for their other work or as needing to be disciplined to their ways of working. The project coordinator and researcher, for example, had great difficulty fitting the ictPR research approach into YPSA's standardized monitoring forms. At the same time, there was a growing desire within YPSA to develop the ICT centre as a complete multimedia project, a vision which clearly recognised the specific dynamics of media interventions.

The contrast between these two approaches spells out quite different views of how an ICT project relates to the way in which its partners are themselves embedded in the community. It seems clear that - at least in terms of these issues - projects benefit from having a mixture of partners, giving weight to both media and development perspectives, and contributing specific technical backup.

## Local Authority And Legitimacy

Another issue stands out concerning the impact of partners on the embedding of ICT initiatives: their partners' relationship to the community. As discussed below, the fact that this was a UNESCO programme was often central to the local credibility and understanding of the initiatives. However, local partners also involve different histories of their local involvement. Above all, the local legitimacy and authority of partner organisations was crucial to the way in which communities related to projects. In two cases, this local legitimacy was a precondition for target groups to access the ICT Centres at all:





The Seelampur initiative was targeted at young Muslim women leading extremely restricted lives with little access to public spaces or social gatherings outside the family. Most participants were only able to attend for one reason: the centre was located in the local Madrasa, under the protection of the Maulana (who is one of the major leaders of the entire Delhi Muslim community). This in itself secured the centre as a legitimate and safe space for young women to attend. In Sitakund, when young women were asked why they were allowed to travel considerable distances to the ICT centre (located in a commercial centre that would normally be out of bounds) but were not allowed to attend school across the road, they pointed to the local legitimacy and reputation of YPSA. It has had a strong presence in the area for over 20 years. More specifically, it had a ubiquitous presence in every village: if their parents were worried about anything going on at the centre, they know YPSA people they could easily contact.

Local authority can of course be problematic or provisional. Darjeeling's association with the Darjeeling Himalayan Railway connected it to a major regional initiative and hence associated ICTs with regional development; on the other hand the DHR was in the process of evicting and moving a long established community encroaching on railway land, and the negative feelings were transferred to one of the centres for some time.

### **Inside And Outside 'The Community'**

It is important to recognise that externally funded projects have a necessarily ambiguous relationship to communities, aiming to become effective community organisations yet at the same time linking the community to the 'outside' in various ways. Embedding programmes in communities is therefore an uneven process and moreover it is not a matter of cutting local initiatives from these wider networks - indeed these connections are constantly in the minds of local users, both as positive and negative aspects of the projects.

Firstly, the projects were perceived to be part of a UNESCO initiative, which gave them both a special status and a generally warm welcome: everyone knows UNESCO, and there were certainly expectations of more funding, more long term development and perhaps more sophisticated programmes than might be expected of more local NGOs or governmental initiatives. Everyone clearly wanted to convincingly fulfil whatever they perceived to be UNESCO's aims, to be a success and therefore attract more funding. Therefore the way in which each project group framed and communicated their aims had an enormous impact on people's discourses, if not necessarily on their practice.

Another aspect of the UNESCO link initially seemed superficial but was actually highly significant. The link both to UNESCO and to partner organisations brought foreign or non-local visitors to the projects: UNESCO staff and team members, including the research team; and the local staff were known to travel to workshops and training sessions, representing their projects within the programme. These visits and connections were major aspects of the projects to local participants, bringing both status and new ideas to their communities. For example during a major crisis in Budikote, Namma Dhwani staff were surprised to hear how much they were valued by many Panchayat members. Amongst the major reasons the latter gave for this value was that Namma Dhwani connected Budikote to a wider world of development agencies and experts. This both opened up knowledge resources and other resources, and also placed them on the map. Similarly, as discussed elsewhere, the value of being non-local extended to the respect for staff members as role models, people with higher education and wider experience that local users wanted to emulate and benefit from.

In this respect, successful local embeddedness does not mean that community members come to see the ICT initiative as a purely local entity but precisely the opposite: it is the connection to the non-local that is also valued by community members. At the same time, connection to the non-local can be seen as a source of danger and a point of attack on projects, particularly in times of crisis. For example, when local political figures in Uva felt threatened by the community radio they articulated this in terms of UCR as an outside influence: UCR was showing a lack of respect for local ways of doing politics and importing a style of community politics that was inappropriate to non-Western contexts. Similarly, during crises in Budikote, staff and partner organisations who had been working and living in the community for decades were labelled as outsiders who were illegitimately interfering in local matters, and self help groups that had been working with them over this entire period distanced themselves from both the partners and from the ICT initiative by claiming an authentically local status.

Rather than understanding 'community media' in terms of a sharp divide between community ownership and external actors, it seems more important to recognise that ICT initiatives embody enduring connections between the local and the non-local which will not go away (and are in some respects highly valued) but rather need to be constantly negotiated and built into our understandings of how projects work within their communities.

## Social And Financial Sustainability

The aim of embedding ICT initiatives in their communities is closely connected to the idea of sustainability. Although sustainability is often discussed in largely financial terms - the ability to generate revenues that will maintain a project - we have found that sustainability involves several interconnected dimensions. We have already discussed technical sustainability in chapter 2, while 'embedding' can be also understood as attempts to achieve social sustainability - securing the commitment, ownership and involvement of community networks and organisations. Financial sustainability depends upon securing both this social embedding and technical resources, while social and technical sustainability obviously require sufficient financial resources.

Many of the local initiatives are now concerned with maintaining the centres and their activities well beyond specific 'project periods', and are therefore increasingly concerned with questions of sustainability. Plans for financial sustainability are beginning to be implemented by initiatives or will be implemented in the coming months. For instance, in the Seelampur site the centre was opened in the existing Madrasa primarily because of concerns about sustainability. The centre is taking further steps to benefit from this situation by generating a small income from providing various services such as photocopying and printing, raising fees from high quality courses, as well as from the support of the Maulana and others at the center and greater ownership by the SHG formed as an offshoot of the centre.

I tried discussing this topic many times with Maulanajee. Last time when I raised this issue with him he very politely turned away my question and asked me 'Madam can you guess the monthly expenses of running this Madarsa'. When I shook my head, he smilingly informed me the running cost of the Madarsa is approx 1.5 lakh per month. Further he mentioned that all expenses are pooled from the community since the Government grant is very limited. He told me when the Madarsa is able to sustain such mammoth expenses; he felt it is needless to be worried about sustenance and assured me that he would extend all his support whenever needed.

Monthly Expenses Of Running Seelampur Community ICT Centre:

1.	Staff Salaries	Rs 6000
2.	Internet charges	Rs 1000
3.	Telephone	Rs 1,000
4.	Maintenance contract of 5 pc	Rs 1790
5.	Cartridge approx.	Rs 400
6.	Diesel	Rs 120(fixed)

Total Expenses per month = RS.10310 Approx. 10,500/month This does not include the rental and electricity costs for running the ICT Centre since these are provided by the Madarsa and if these are taken into account then the actual deficit is much higher.

No. of total participants every month = 150

Fee exempted = 30 participants

Fees collected from remainder 120 participants@50/month =Rs 6000/month

Revenues the Job work through the center have started monthly yields of Rs 25 to 30 everyday. In next few months' income through job work expected to be at least 1500/ month.

Hence total monthly earnings =Approx. (6000+1500)=7500/month

Monthly deficit =10500-7500=Rs 3000/Month

A new plan is to open the center to boys in the evenings. This will address the issue of sustainability and also bring about better participation of both genders. It clearly emerged from a meetings with boys from Seelampur that they are ready to pay up to Rs 200/month for the training (provided the generator works in case of power shutdowns).

One attempt has also been to motivate the women engaged in occupational activities to help meet some expenses for the running of the ICT center. But it is too early to expect any financial help from them as the group itself is not self-sustaining yet and is dependent on the intervention for its marketing linkages.

*Fieldnotes from Seelampur researcher*

Other sites also attempt to earn small incomes by offering services at the centre (whether computer training, photocopying, printing or e-mail) to sustain its activities. The possibilities for income generation may be very diverse and creative. For example, at Tansen participants make and sell programmes to TV channels. This is both a source of income and creates opportunities for the participants, increasing their sense of commitment and responsibility towards the initiative and the running of the centre. Similarly, several Darjeeling sites held a 'sustainability workshop' at which a diversified programme of sustainability proposals was adopted. This included plans for both increasing the number of monthly paid members through membership drives and networking, and for raising the monthly subscription cost. It also included offering internet facilities to non-members on a commercial basis, selling blank CDs as well as downloaded music, offering tutorial classes (including English classes) and offering computer games at commercial rates. The plans would have allowed one of the sites to purchase a new computer within six months as well as sustaining daily running costs.

Another means through which initiatives are being made sustainable is by cutting costs. For example, the Tamil Nadu centres are located in the houses of SHG members, rather than renting or

constructing purpose built sites. Financial and other contributions towards low rent, maintenance and security are arranged locally, between the members. This clearly not only reduces costs but directly connects issues of social and financial sustainability. When it works well, financial arrangements derive from the commitment, ingenuity and sense of ownership of the members. When these are lacking, even everyday running of the centre can be problematic and often dependent on the drive of one or two committed members.

The involvement of volunteers reflects similar issues: volunteers may contribute substantially to the project while being paid little or nothing other than expenses but they participate on the basis of social and personal commitment, which can be variable and itself has to be sustained through the efforts of the initiative. As discussed above, both Namma Dhvani and Nabanna involved a mix of both paid local participants and unpaid volunteers. Both required careful organisational support and policies that clarified both social and financial commitments and responsibilities.

Where such plans for financial sustainability have been actually implemented, there is still a substantial difference between the income generated and the expenditure. While extra income may contribute to daily running costs it is difficult to imagine many of the initiatives generating income, or reducing expenditure, sufficient to employ staff or replace equipment. This is also true of sites with particular technical problems such as unreliable power supply (so that alternative means have to be sought) or expensive dial-up connectivity (e.g. in Seelampur dial-up connection costed 4-5000 Rs per month). There is a kind of vicious circle involved here: an initiative may need to invest in good quality connectivity, peripherals and training if it is to offer the extra services that people will pay for and thus generate income for the centre's continued life.

Possibly the crucial issue for sustainability across the projects has been organisational structures both within initiatives and in their relationships with partners. To take a negative example first, grassroots participants at Darjeeling, as we have seen, were able to develop sophisticated and carefully costed sustainability plans but these were thwarted by partner organisations that were relatively unconnected to the everyday operations and aims of the initiative, and in fact closed one of the centres the day after the sustainability workshop. Lack of communication and lack of understanding of what the centres were trying to accomplish undermined all aspects of sustainability - technical, social and financial. By way of contrast, Nabanna's and Seelampur's partner organisations were tightly integrated with the initiatives and therefore able to provide appropriate technical support and carefully developed plans for greater financial self-reliance; they were also able to work together to develop links with community networks in more durable organisational forms.

While these experiences have revealed the challenges involved in attaining financial sustainability, the related and more difficult challenge is to embed the issues in the community in such a way that they can relate to it and build a sense of ownership towards the initiative. The sources of an income for the centre would then just be one means towards the end and with a commitment to the issues among the community various means for financial sustainability could be sought.

## Summary Of Key Findings

What emerges most clearly from the ictPR research and experience is that embedding ICT initiatives in communities cannot be a matter of finding fool-proof organisational models that integrate partners, projects and community organisations. In keeping with the rest of our approach, it is better understood in terms of a range of organisational responses and resources that can work within a



number of processes that link (or separate) projects and communities. Moreover, it is significant that local leadership, and a cohort of particularly active and able participants or volunteers are often the decisive ingredients for establishing a successful community ICT organisation. Yet where long term embedding depends on specific personalities, there are clear dangers.

A crucial issue is scale: groups like Darjeeling and UCR operate on a large scale, leading to a disjuncture between 'macro' and 'micro'. While both had some success in developing community ownership at the micro level, they were involved in disabling macro and political contexts. In Darjeeling, while several of the local centres managed to develop a strong sense of local community ownership, the overall structure for the project was couched within a complex and politically volatile series of relationships. In May of 2004, differences of opinion resulted in the centres being shut down by the main partner. A similar situation occurred in Uva Province with the CMC network. Political pressures grew as the election drew closer in April of 2004. Although the centres, particularly Buttala, had made impressive gains in building a local sense of ownership and control over the operations of the CMCs, decisions at the overarching political level dramatically and negatively affected local operations.

By contrast, the more localised initiatives were able to develop more complex and intimate community connections, and more fully develop new organisations and networks. The issue for them is whether they will be able to stabilise these over the long term, and in organisational forms that can survive changes of staff and participants. Moreover, building on existing local groups such as SHGs has been very productive but can also involve considerable volatility. Nonetheless, projects have worked best when based on clear and unambiguous strategies and procedures that work to deliver locally appropriate initiatives based on close communication and connection with users who are able to develop a sense of ownership and thus see benefits in trying to make the initiative financially sustainable over the longer term.



# 8

## CONCLUSION

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**T**he communicative ecologies of poor communities already include ICTs in at least one profoundly important sense: an almost universal belief that ICTs and ICT skills are increasingly central to surviving or thriving in the modern world, and that these technologies increasingly define their children's future - globally, regionally, nationally and locally. At the same time, these are considered to be prestigious technologies, associated with educated people and local and global elites. From the perspective of poor communities, ICTs are understood both as essential to them and as 'not for people like us'.

At the most basic and powerful level, ICT and media initiatives provide poor and marginalised people with the chance to engage realistically and practically with those technologies, and with that 'future' or 'modernity' with which they are so closely associated. This in itself can have a huge impact on the poverty reduction strategies developed by people themselves, and the knowledge and experience on which those strategies are based, with direct and indirect implications for how they think about such things as employment opportunities, enterprise, education, family budgets and their social connectedness. Conversely, given the enormous investments (or anxieties) amongst poor people about skilling their children in ICTs (particularly computing) as an essential skill for their future, ICT and media initiatives can both realise a major educational potential and reduce the burden of ICTs on poor families by providing high quality and cheap or free access and training.

To put this more generally, poor communities have a right to access those technologies which they know to be shaping their contemporary world and their own and their children's future not only in order to make use of them, but also to gain a more practical and realistic understanding of how to



locate themselves in that 'modern world' to their better advantage. ICT and media centres, both through technology access and through the social networking they provide, empower people to develop their own poverty reduction strategies, by increasing their understanding, skills, information, networks and experience.

We have stressed throughout this publication that the many ICTs and media we have employed, and their many combinations, have extremely diverse connections to poverty reduction, and that these cannot be reduced to single focuses such as information access. We have also stressed that indirect, surprising, and subtle uses of ICTs are often as important as those with a clear and targeted relationship to poverty, particularly in the formative period of an initiative and in the users' early engagements with ICTs. Put simply, ICT and media initiatives - in order to realise the enormous potentials about which we are now very confident - must be as responsive, creative, reflective and innovative as the users have shown themselves to be. It is the responsibility of the initiatives and programmes to find and develop the more specific connections between ICTs and poverty reduction, and to do this by making their organisations responsive on the basis of sensitive, location-specific knowledge (research and experience) both of local media use and of the local structures, dynamics and meanings of poverty in their community. As we have seen, these connections are diverse and often unpredictable; they need to be identified in the actual processes of project development rather than derived from general and abstract models of the properties of technologies or of poverty or of the connections between them.

The ictPR project began with a specific focus on women and youth, and we have been constantly struck by their enthusiasm, motivation and commitment to ICTs and projects across the entire programme, as well as by the strong support (or sometimes simple tolerance) of their participation on the part of their parents. This intense participation arises partly because of the connection between ICTs and the future, discussed above, but also because of the pleasures involved in the technology use, in working socially and in groups, in speaking, acting and networking freely and many other reasons that we have discussed. Young men and women, and in some cases older women, have become the mainstays of projects, whether as volunteers or simply as very active participants. In many cases they have started or developed organisations on the basis of this involvement, or more informally have actively spread new ideas and initiatives through their communities.

There is a huge potential to build on this involvement and enthusiasm for participation in ICTs initiatives amongst young people, which is often strongly supported by their families and communities. Not least, as we have stressed, there is enormous scope to intervene in concepts and practices of education and learning. ICT and media initiatives can develop and exemplify alternative styles of learning (e.g., peer and group learning, hands-on practical rather than 'theoretical' education, new relationships to teachers and authorities, learning through self-expression). Moreover, they can and should constitute a major intervention in conventional schooling, both government and private. There is a pressing need to work in partnership with teachers and authorities in both sectors, on the basis of providing access to teaching materials and courses through ICTs, local production of teaching materials (such as radio and video programmes), teaching ICT skills to teachers, encouraging more interactive teaching methods modelled on ICT and media training and translated to standard school subjects.

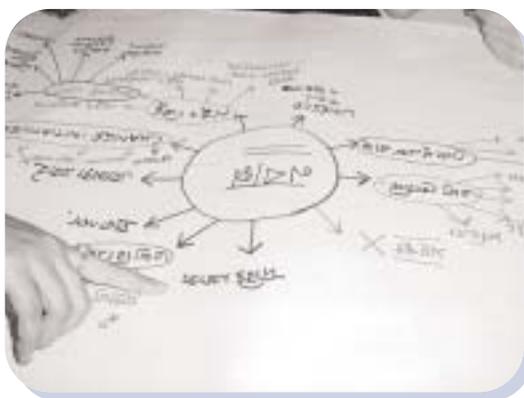
We have been particularly struck by the capacity of ICT centres to bring together and reconfigure local social networks, including existing local organisations. Although we have noted that all

initiatives constitute (potentially problematic) interventions in complex local social structures, which need to be researched and dealt with sensitively, we also stress that large numbers of poor participants are brought into wider and more diverse social networks (e.g., working and socialising with the opposite sex, with different castes or ethnicities, with different levels and structures of poverty, education and so on, with authorities, with people from outside their community). And they generally develop the confidence to operate socially within these new or reconfigured networks. This may help to begin to overcome social exclusions that are central to their poverty, and it often forms the basis for new formal or informal ways of organising themselves, or for changing their relationship to existing local organisations. The task for many initiatives is to find formal or informal organisational models that are appropriate to stabilising and supporting these developments.

Although we have stressed indirect connections between ICTs and poverty, it is clear that there are specific - but very diverse - information and communication needs that implicate poverty reduction in fairly straightforward ways. ICT centres - particularly when construed as information centres rather than technology or ICT centres - both exemplify and enact people's right to information, and to the free flow of information; whether that information comes via internet, radio, word of mouth or paper is less important than the demonstration of the right of free access to information; denial of this right is understood to be central to reproducing their poverty. Similarly, participation in radio and video projects offers the experience of projecting one's voice directly into a local public sphere, and of the capacity of media to be locally owned and to circulate locally relevant information and ideas. The costs of collecting, organising, translating and verifying locally relevant information is in some respects very high, and - as Darjeeling has shown - sometimes best dealt with through a low-tech approach targeted on very simple and basic information which is nonetheless highly valued (both in itself and as a demonstration of information rights). It also seems clear - particularly through Nabanna's experiments - that the very process of information gathering and circulation can actively involve ever widening circles of local participants.

In these respects, information issues are really a subset of the wider issue of 'media mixes' and content creation. As we have argued throughout, we need to realise the potential of specific ICTs as they are used in connection with other ICTs, new and old, as well as other modes of communication within the community. This requires modes of training and of media use that are more exploratory and innovative, more based on pursuing media projects that are relevant to participants, and that allow users to identify and master those aspects of the diverse technologies at their disposal that will best accomplish their purposes.

We cannot stress strongly enough the importance of the methodology that was adopted throughout the ictPR project, and that was integrated into project development with the utmost seriousness, intelligence and creativity by researchers and project workers across the programme. The combination of ethnographic and action research ensured that project development was consistently treated as an experience of learning and responding - to community members, to the technologies, to participants, to project staff. Crucially, the rich experience and knowledge of project workers





could be valued and utilised as research, developed and combined with a wealth of sensitive research tools and reflected upon in everyday project development; and the research process itself could be directed in relation to the emerging and changing needs of specific initiatives and projects. It is also important to recognise that adopting this approach has produced a very different kind of relationship between UNESCO, ictPR and the individual initiatives: specifically, it has allowed all participants to treat every aspect of the programme as experimental and as a learning process, to be monitored and managed through continuous feedback and reflection, rather than evaluated, at the end of a funding period, in terms of general measurements of success in meeting initial aims as stated in project proposals. Amongst other outstanding gains, this has allowed for an exceptional degree of transparency in communications and policy decisions, with a bare minimum of self-promoting reports and a maximum of honest, credible, constructive and detailed assessments of what works and what does not. On the basis of this research approach, projects have been able to identify and develop new or unexpected potentials, and UNESCO and partner organisations have been able to support the initiatives in developing themselves according to their own dynamics.

This kind of responsive and locally relevant research and project development requires considerable investment of time and energy, and required considerable training and support over the past year in order to develop a specific kind of research culture. However, it should be clear from this publication that the location-specific character of this research has not only allowed a high level of reflective responsiveness but has also been compatible with producing comparative and generalisable findings. We have all, in fact, learned an incalculable amount that will feed our future work for many years to come.

## Summary Of Key Findings

Strong links between social and technical networks emerge as highly important for the successful development of community based ICT initiatives that aim to improve the conditions of the poor and marginalised. These links are most likely to be established as strong links if grown over time through gradual, localised and organic developments, and in response to communities of users. In order to achieve this, initiatives need to be responsive to those they seek to include and reflexive about how well they are doing, and how they might do better. The ictPR project initiatives have all developed with at least one researcher who has been trained and supported in ethnographic action research. This approach is designed to create a research culture within initiatives and feed research findings into ongoing project development. These researchers have also contributed to an ongoing bank of research data which we have drawn upon extensively in this publication.

Comparing research and experiences across the initiatives we can see how powerful involvement in local content creation can be as a means of engaging people with ICTs, enabling them to have a voice, and to harness and circulate locally relevant knowledge. It can encourage innovation and creativity in poor users and communities and significantly increase media literacy generally. The initiatives, in their use of new ICTs, can build upon existing community media and multimedia models (particularly community radio and video) which have long traditions of community content development and participatory training and production. This can help shift computer and internet use in the community from general purpose skills and information access to the production of locally relevant content, both through local management of information, and through incorporation of content into media and multimedia formats that are closer to the community. Integrating new ICTs with established media like community radio also draws on the strong organisation and ownership models of community media, which has positive implications for the sustainability of local ICT initiatives.

Poverty has been understood as a complex condition that involves issues of voice, empowerment, rights and opportunities as well as material deprivations. The poor people involved in the initiatives have themselves defined poverty in very broad and diverse terms, and in very locally-specific ways. Poverty is always relative, involving not only complex differences in its nature and degree but also close connections between people in different poverty conditions.

ICTs already play a crucial symbolic role in peoples' aspirations and their idea of what skills will be necessary for the future. Many poor people make large investments, at huge sacrifice, to obtain ICT education and access (as well as other forms of education) for themselves or their children. Poverty itself is for many people a major barrier to participation that initiatives are working to overcome, as those who are most marginalised are often those who feel most excluded from both ICTs and therefore from future hope. In particular, initiatives are dealing with the inability of many poor people to release sufficient time (and therefore income loss) to attend centres; and social, financial and technical barriers to mobility; marginalization through gender, caste, ethnicity and other factors that make participants feel they have no proper place in ICTs and ICT initiatives. Particularly in the case of the poorest and most marginalized, ICT initiatives have a greater challenge to demonstrate the practical relevance and benefits of ICT skills and access. The issue of practical and direct poverty impacts is crucial as the ictPR experience would suggest that what participants accomplish is not so much a direct impact on their employability or income generating capacity but more long term and indirect conditions for social advancement, such as a free space for self development, new modes of learning as well as routes back into conventional education, expanded social networks and the confidence to act socially, new ideas as to what is possible in the way of work and social relationships. All of these more indirect benefits are very appropriate realisations of more symbolic associations with ICTs - as an essential skill for future advancement - that attract them to the projects in the first place.

ICT initiatives are clearly valued for providing a different model of teaching and learning that stands in marked contrast to most participants' general experience of schooling. ICT initiatives are highly valued for providing practical, hands-on learning rather than 'theoretical' teaching; and for creative, informal and sociable environments which are encouraging and supportive, and which facilitate good relationships with both staff and other participants.

'Empowerment' as it is experienced in the initiatives refers broadly to the challenging of social norms, shifts in power relations, voice and expression, a sense of rights, an increase in perceived opportunity, and increases in 'confidence' and the consequences that arise from this. Empowerment therefore has wide and often locally specific meanings. Approaches to it on the part of the initiatives must be equally flexible and responsive. The often subtle and very indirect ways in which ICT initiatives are developing confidence and capabilities among participants is important, especially as they make it more likely that more tangible or measurable outcomes will follow in time.

ICTs link to empowerment in extremely diverse ways. For many poor participants, mastering





the computer or making a radio programme does not simply mean learning and using a new tool. It means appropriating as their own prestigious modern technologies, signifiers of a modernity that they previously felt to be completely out of their reach. Similarly, engagement with ICTs has a sometimes dramatic impact on participants' social standing in their homes or community.

ICT skills do have direct and practical links to aspects of empowerment such as literacy, voice and expression, and access to information. Nonetheless some of the most compelling expressions of empowerment arise from the way in which social and technical skills are interrelated through group work and projects, and through the free social interaction and networking experienced in the initiatives. The combination of social and technical confidence often results in participants coming to new understandings of their status, opportunities and value. Nevertheless, as a process of personal and social change, empowerment is a contradictory and negotiated process that can involve losses as well as gains, and power contests that can threaten both participants and initiatives. Communities comprise complex social networks, with equally complex inclusions and exclusions. They already contain flows of information and communication, as well as blockages to those flows. The ICT initiatives understand their interventions in the community in terms of how they connect to these social networks, and how they reconfigure them or create new ones.

The ictPR initiatives and research clearly show the capacity of such interventions both to enlist and expand existing networks, and to bring diverse and excluded people within a common social space. This can expand the flow of information and communication as well as the individual's confidence and capacity to benefit from wider social networks. ICT initiatives have shown a considerable capacity to overcome ethnic, religious and caste barriers. In these respects, the ICT initiatives have been as important as a social intervention as they have as a technical one.

Successful development of the initiatives has proven to be a gradual process that works best when it develops organically from both community demands and careful research, and has generally taken the form of small scale experiments and learning experiences. Clear and unambiguous strategies and procedures have been shown to be necessary at an organisational level, to work to deliver locally appropriate initiatives based on close communication and connection with users who are able to develop a sense of local ownership and thus see benefits in working to make the initiative financially sustainable from a grassroots level.

The methodology that was adopted throughout the ictPR project has proved a great success. Integrated into local initiatives, local researchers have approached their work with the utmost seriousness, intelligence and creativity across the ictPR project. The combination of ethnographic and action research is ensuring that project development is consistently treated as an experience of learning and responding - to community members, to the technologies, to participants, to other project staff. The rich experience and knowledge of project workers is being valued and utilized as research, developed and combined with a wealth of sensitive research tools and reflected upon in everyday project development; and the research process itself is being directed in relation to the emerging and changing needs of specific initiatives and projects. Adopting this approach has produced a unique relationship between UNESCO, ictPR and the individual initiatives: specifically, it has allowed all participants to treat every aspect of the programme as experimental and as a learning process, to be monitored and managed through continuous feedback and reflection, rather than evaluated at the end of a funding period in terms of general measurements of success in meeting initial aims as stated in project proposals. Amongst other gains, this has allowed for a high degree of transparency in communications and policy decisions and honest, credible, constructive and detailed assessments of



what works and what doesn't. On the basis of this research approach, projects have been able to identify and develop new or unexpected potentials, and UNESCO and partner organizations have been able to support the initiatives in developing themselves according to their own dynamics.

## Looking Forward

UNESCO intends to continue to develop the network of researchers, and extend the number of initiatives involved. More research workshops where researchers and other project staff from across the ictPR project come together for more advanced training and for the sharing and dissemination of experiences and research findings are planned, with support from the Creative Industries Research and Applications Centre (CIRAC) at the Queensland University of Technology. Local researchers trained through the ictPR programme are now training other local researchers in new initiatives that are joining the network. The next phase of research training will focus on analysis and writing up research in a range of formats. We are seeking to accredit the methodology training so that additional outcomes in terms of personal self development can be obtained by the local researchers. The online interface for researchers and research trainers/supervisors developed and hosted by CIRAC has proved extremely useful and continues to grow. It is planned to create a new, purpose built research online support interface to support local researchers and other project staff and to help to grow the research network.

The work with eNRICH reveals a wider scope to develop new solutions for local content development, packaging, organisation and dissemination. This approach clearly requires a greater degree of local training and ongoing technical support. The process of evolving solutions to meet grassroots needs is being further supported and developed. A new knowledge management system will be developed through the NIC in collaboration with experts from CIRAC who have been developing similar systems in Australia, learning from the experience of eNRICH and overcoming some of the current limitations of that software.

A new training and support programme in local content creation suitable for use and distribution on old and new platforms is also being developed. This is exploring the opportunities to use new technologies (computer and internet) to produce and disseminate content that can also be accessed via older technologies. This might be seen as part of the development of a 'community model' for new technology content creation which is already established for radio and video. Locally generated content is a core part of future developments that UNESCO is particularly interested to support. More work is also being developed on enterprise and sustainability issues.

All of these current and future developments are in response to the identified needs of the individual initiatives and the ictPR project as a whole. They can be summarised as,

1. additional and advanced research training and extension of the research network;
2. developing forms and training in local content creation;
3. improving and expanding the knowledge management system; and,
4. working more closely on local enterprise and project sustainability.

It is a testament to the work of the local researchers that the ictPR project is developing in responsive and innovative ways to the identified needs of local participants and communities.



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