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From Beedees to CDs: Snapshots from a Journey through India's Rural Knowledge Centres

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In October 2002, twenty-five people from eleven different countries participated in the first South-South travelling workshop on ICT-enabled development, organised by the M.S. Swaminathan Research Foundation (MSSRF). The participating practitioners, project managers, government officials and researchers were united by their keen interest in the contributions of multi-purpose knowledge centres in rural development. The visitors concluded that rural ICT centres, if properly designed and managed, can be much more than just 'access centres.' They can become community owned 'knowledge centres' that directly and indirectly empower people living in rural areas.

Success factors

After two weeks bumping around rural India, the multinational team of travellers¹ identified six key issues that underlie the success of the MSSRF knowledge centres – which can be compared to telecentres, community access centres, Internet information centres or kiosks. The six factors, discussed in more detail in this research brief, are:

Sustainable utilisation of local resources;
Knowledge empowerment and management;
Sustainability;
Gender empowerment;
Community involvement;
Technologies as tools.



¹ From Honduras, the Philippines, Mongolia, Malaysia, India, Indonesia, Sri Lanka, Tanzania, Uganda, Zimbabwe, and the Netherlands

Sustainable utilisation of local resources

The M.S. Swaminathan Research Foundation's philosophy, facilitating communities and individuals to initiate development, is based on the creation of sustainable livelihoods for the rural poor. One way by which this can be achieved is by utilizing – in a sustainable manner – the natural local resources provided by the ecology of the community's setting.

A good example of this philosophy can be found at the Sevanakarainpatty paper factory, *profitably run and fully owned* by the Dalit² community Jansirany women's self-help group.

The women of this group were trained and coached for 18 months in the skills of producing paper and durable packaging boards using banana fibre. The raw materials are obtained free of charge from local banana growers who see it as waste.

In this project, ICTs are used primarily for marketing and administrative purposes. Orders are sent to the factory by email, administration and accounting is done on a stand-alone computer owned by the small factory.

² India's social structure is dominated by a deeply stratified system according to "Caste", which determines a person's social status at birth. The *dalit* are the lowest castes. Dalit members are often landless laborers, and are the poorest, least regarded and most marginalized members of Indian society.



The factory has taught the women new skills, not only in paper production, but also in financial and business management, the use of ICTs, and marketing. This enterprise has empowered a formerly marginalised group to run a sustainable and profitable livelihood. This not only makes them financially independent, it contributes to their self-esteem and social confidence, despite the stigma of their caste.

The technique used by the paper factory can be adapted, using other 'waste' products such as fibres, cotton, etc. One participant from Tanzania identified this as an opportunity for the large cotton industry in her country, where cotton waste is burned at the end of the ginning season.

Knowledge empowerment and management

The work of the Reddiarchatram Seed Growers Association at the village knowledge centre of Kannivadi shows how ICT-supported indigenous knowledge can be the basis for sustainable livelihoods. Indigenous knowledge is used in ways that provide for profitable livelihoods in a rural community context.

The main driver for the success of this association is the *horizontal flow of knowledge*, facilitated by the village knowledge centre and a network of farmers, seed growers, market operators, researchers and traders. The community has created a strong network, mainly through self-help groups, to access information on market prices, weather conditions, pest control, etc. Elected locals manage the network, comprising also marginal farmers whose substantial contribution is

the result of their hands-on experience and indigenous knowledge.

It is predominantly through this network, in which the knowledge centre functions as a market place, that people are attracted to use the telecentre facility, attend training, and use the Internet. In doing so, they see the added value that ICTs bring to their enterprises, and they are willing to contribute to the knowledge centre's upkeep.

In the computerisation project in Kinondoni District, Tanzania, a similar horizontal flow of knowledge allows more effective management of data and more efficient procurement to take place. In this project, a hospital ward, a dispensary and a school are equipped with stand-alone computers. The employees have been trained to register day-to-day activities on the systems, using simple Excel sheets.

The data from the three locations can be compared: the hospital registers show how many cases of malaria were recorded, the dispensary knows how much malaria medicine was sold or distributed, and the school has marked how many children were home sick during the same period. In this way, healthcare budgets can be more effectively determined, statistics gathered, awareness programmes planned, and more efficient procurement needs projected.



Sustainability of the initiatives

Thanks to the broad community buy-in to the knowledge centre projects, the villagers are enthusiastic about the centres. However, not all of the centres are yet financially independent from MSSRF. Although there is a strong enabling environment for the centres, the financial

sustainability of the projects was a major topic of interest for the travelling team.

The first factor for the success of the centres, already mentioned above, is the broad community buy-in. More than that, the centres are *community-owned*. MSSRF insists that a new knowledge centre is only begun if and when the village provides the building, the electricity and the telephone connection. The centres are run entirely by volunteers from the local community. The trust, respect and confidence needed to build this strong basis take a lot of patience to build. It was noted however that the strong sense of community in India is not always encountered elsewhere, and hence this may not be a replicable business model in other contexts.

Where a centre is *commercially* owned, the same feeling of ownership can be achieved where the *activities* run by the centre are community owned. In other words, participants in rural areas are motivated by community-focused activities which the participants consider to be their own. Examples of this are the updating of local market and weather information, literacy programmes, etc., all with help of the local knowledge centre.

On the other hand, the MSSRF bio-village near Pondicherry shows how a combination of biodiversity and economic viability can be achieved for, or rather *around* a community access centre. At the same time, many other advantages are achieved in this model, such as empowerment, education, social and cultural development, and profitable livelihoods.



The centre was set up by MSSRF almost four years ago as a research hub: local farmers were given land, support and tools to execute a number

of agricultural experiments. They could keep what they produced so long as they provided the research results needed by the MSSRF. This provided an opportunity for several self-help groups to establish micro-enterprises, making and selling cassava chips, breeding ornamental fish, establishing animal husbandry practices, developing more efficient rice growing methods, etc.



The combined profit was reinvested and used to encourage the establishment of further self-help groups. In this community, the empowerment and financial independence achieved by the groups has fully penetrated the community, to the degree that a person's suitability for marriage is also linked to their participation in a local self-help group.

Based on their new expertise, several of the female volunteers of the centre have been able to establish themselves as consultants – to regional government, to teach other people how to establish and run self-help groups based on the bio-village model, and to explain how ICTs can be used to access and market the information required to run their businesses effectively. The bio-village has become a hub for people to research how to manage pests, follow training, access secretarial services, search job opportunities, etc. These are services that people are willing to pay for.

Although MSSRF partially withdrew from the project in 2001, the centre is still going strong. It is proving to be sustainable and profitable, despite the volunteer-based system it depends on, and thanks to the network and social impact of the centre that has allowed it to develop from an *access centre* into a *knowledge marketplace*.

The volunteer model is less used in community access centres outside of India. However, there are other good methods to achieve sustainability through community buy-in. For example, the e-Bario project, Malaysia has managed to place itself on the map within the community and beyond, through strong *branding* and merchandising. Bario is a popular place for adventurous tourists to visit. Hence on their travels, they frequent the centre, tucked away in the mountains of Sarawak, although it is aimed primarily at community access. Villagers in turn are drawn towards the tourists.

A sense of pride to be involved with the centre has evolved, closely linked to the image of the brand and the opportunities it represents. E-Bario capitalises on this and it has a logo, caps, t-shirts and stickers. Tourists are attracted to them as souvenirs; locals are attracted to them as a sign of development and progressiveness. The strong local position of the brand has provided free advertising for the centre both to tourists and the local market, it attracts users to the centre and it encourages people to want to be associated with the image and to pay for services at the centre. As a bonus, the merchandising provides additional income to the centre.

Gender empowerment

Female self-help groups run most of the village knowledge centres. This is somewhat surprising since only one of the panchayats (local village councils) had a female representative. Gender sensitisation throughout the communities was a major benefit of the female self-help groups, giving in turn confidence and status to the female volunteers. They have become dedicated, skilled, enthusiastic and proud of what they have achieved.



Let us look at two examples. The first is in the village of Embalam where a community knowledge centre is located in the village temple. Run by female self-help groups, the centre successfully catalyses empowerment, confidence, and revenue generation: women are often initially attracted to the centre because they can find their friends there, or gather there to chat as their children browse the Internet. The self-help groups provide secretarial services, such as the typing of job applications, CVs, subsidy applications, etc.



Although the panchayat initially was not convinced to allow the women to run the centre, the added value of the daily information the women post on the temple notice-board benefits the entire village and support has thus increased. Rural women are entirely responsible for the household and for marketing; nonetheless their husbands realise the value of the new services through which the women can increase their skills and generate some additional revenue. The women who participate in self-help groups are financially more independent and outside of the home they show great confidence in presenting their achievements.

On the other side of the spectrum is the fishing village of Nallavadu. At the time of the South-South Exchange visit, women took no part in the knowledge centre and did not join the discussion at any time, not even when addressed directly. As elsewhere in the project, the women's time in Nallavadu is entirely consumed by marketing and housekeeping and, in this village, the husbands would not allow their wives to use some of that time for knowledge centre activities.

This village displayed a significantly different approach in which the women were completely excluded from discussion even though they were,

according to the male knowledge centre volunteer, interested in accessing reproductive health and other information, which the knowledge centre could facilitate. The gender segregation apparent in this village seemed to block any possibilities of female empowerment such as was displayed in the other villages.



However, following the lively discussions between the workshop participants and the (male) villagers, the men reconsidered the situation. Within a month of the visit, the panchayat council agreed to a proposal to form a women's self-help group in the village. The village knowledge centre volunteers from Embalam will help in the development of the project and provide training for the new group members. This is a direct consequence of the travelling workshop, and the exchange of knowledge and experiences.

To fully harness the benefits of ICTs in the empowerment of marginalised groups, gender awareness plays a significant role. For instance, training programmes provided by CEEWA Uganda on ICTs for rural development include both husband and wife from the outset in the concept and creation of self-help groups and knowledge centres. A well-known saying quoted was that "If you educate a woman, you educate the whole nation". However, despite these promising initiatives for gender empowerment, women are still struggling for recognition in many parts of rural Africa.

Community involvement

The knowledge centres in Pondicherry are open to the entire community, irrespective of age, sex, religion, caste, level of literacy and education. The active knowledge centre community includes

children who are often active and eager participants in all types of training programmes, from literacy programmes, to basic ICT skills and HTML. Through participation, the communities have been empowered to access relevant information on credit schemes, government programmes, market prices, pest control, agricultural information and animal husbandry practices. This has played an important role in the development of the rural poor who feel part and parcel of the knowledge centre. Gender sensitisation has improved with leaps and bounds, thanks to the high level of female participation in the knowledge centres, and their successes as part of self-help groups.

Institutionalisation of the self-help groups and the knowledge centre-model has improved on two levels: first, within the government institutes and subsidy programmes, and second, with commercial financial institutes. Nallavadu fishing village illustrates how volunteers have been able to establish a fair degree of interaction with local government officials through the knowledge centre.

Traditionally, to register a birth, apply for a subsidy, or perform any other civil service, this often involves travelling back and forth several times to a local government office, hoping the correct official is present (and willing to cooperate), applying for the documentation, often returning to hand it in, deal with legalities, etc. All in all, it is a long and tiresome project, not only in India we might add.



In Nallavadu, the volunteers obtained a number of frequently needed documents from the government officials and digitised these. When the villagers need one of these forms, they are

able to access them from the knowledge centre, and pay a small fee for the service. This saves the villagers valuable time, but more than that, it allows them to access subsidy programmes which they often didn't know existed or to which government bureaucrats would deny them access. In this manner, a widow with a handicapped child accessed a subsidy through the knowledge centre, after government officials had been reluctant to cooperate with the application process when she applied in person.



The local government has grown to appreciate the efficiency and effectiveness of this system and now accepts digitally transmitted documents from the villagers, via the knowledge centre. Further, important government information or news is transmitted in the village from the knowledge centre loudspeakers; likewise, the government counts on the knowledge centre to transmit messages to the villagers. All in all, it shows that the projects benefit the villagers and the government.

So far, there has been a 100% rate of repayment on loans to self-help groups. This is largely because the self-help groups are made up of family members or members of a single community. The firm basis of trust underlying the ventures that people establish through their group encourages the members to be reliable in paying their dues and debts. If people default, their peers will question them, support them if their reason is valid, and scold them if their reason is not genuine. In a country with a strong sense of community, this has a high impact.

The reliability of self-help groups has not gone unnoticed. For example, the new strategy for one of the major Pondicherry banks includes stronger

support of self-help agricultural ventures. However, because the community members are better informed through their access to the Internet, they are cautious of high-interest loans. Now, through their knowledge centres, they know where they can access attractive rates, they have reliable accounting and administration systems, and their confidence and negotiation skills have been raised.

In Kannivadi, self-help groups prefer to ask the Kulumai Federation when credit is needed, rather than relying on commercial banks. Federation rates are not only more attractive. Due to the community ownership of the credit, the payment system is more adapted to the needs of the villagers.

In many of the other countries represented during the workshop, self-help groups also provide micro-credit. In Tanzania, for example, such groups are the only option for poor people who do not have the matching funds and other sureties needed to borrow from commercial banks.



Technologies as tools

The concept of the *knowledge centre*, as opposed to an access centre, enforces the notion that it is not so much the technology in itself but rather technology as a means to an end, which can facilitate development. The examples from the MSSRF projects show that it is not so much the *telecentre* facility that attracts people to the centres, as the *networking* facility. We recognise, furthermore, a strong network, self-help groups providing venture capital and support, and a thirst for information and community embedding, as the critical success factors. However, the technology is the tool that allows self-help groups, networks,

communities, and training centres to access information pertinent to the success of their ventures.

ICTs should, in this concept, also be seen from a broad perspective. The loudspeaker in the fishing village of Nallavadu was the primary mode of information dissemination, extending the reach of information delivered via the Internet.

Likewise, radio and telephony is used in many African countries to disseminate market information, weather reports, etc.

An interesting and effective use of ICTs for rural development through a knowledge centre is the literacy programme in the hamlet of Samiarpatty. The villagers have been provided with a digital camera, a CD burner and a computer with touch screen. Two local volunteers have been trained to use these technologies. The volunteers visited with one person in each family of the village and showed them how to use the camera and to take photographs of things that are important to or of interest to them. Subsequently, these photos are mounted, with the assistance of the volunteers, in a PowerPoint slideshow. The names of the items are written underneath each image by the volunteers ("this is my house", or "these are my children"). Finally, the slideshows are burnt onto a CD.



The slideshows are used to teach basic literacy. Using the village touch screen, the villagers familiarise themselves and their families with the words and letters, reading the slideshows. They receive weekly training and writing exercises from the volunteers. In this manner, the students are learning to read and write based on the familiar things all around them. The system has proven very successful, as everyone in the village participates and is now literate or semi-literate.



The beauty of the programme is that people start with recognisable items and words, and when they get bored with the material or complete it, a new CD can be made at low cost.

At the same time, without even noticing, people are trained in basic computer skills. Before they are even literate, many have already mastered basic ICT skills and they are even able to make PowerPoint slide shows. Because the villagers can relate to the training materials, their interest is sparked.

So today, rather than sitting around smoking their beedeas (tobacco dust rolled in a banyan leaf) in their free time, the people of Samiarpatty rush off to the knowledge centre to make and use their CDs.

After word

Two weeks is a long time to be in many places. In India, it is hardly enough to scratch the surface. This brief has presented some snapshots from different villages and hamlets in Pondicherry. For each snapshot, like the villagers in Samiarpatty, we have tried to find some words.



They show a work in progress; they show a work full of promise; they show results and impacts today as well as tomorrow.

In the end, the visitors concluded that rural ICT centres, if properly designed and managed, can be much more than just 'access centres.' They

can become community owned 'knowledge centres' that directly and indirectly empower people living in rural areas. This is a powerful notion that we expect will re-appear, especially in the countries from whence the workshop participants came.

On the workshop itself, participants gave high marks to the south-south travelling format. They saw concrete projects in operation; they were able to explore and deepen their ideas and concepts in discussions where time was not constrained; and they could draw on lessons and insights from several countries at once.

Since the workshop, an open discussion space has been set up to continue the exchanges and knowledge sharing and plans are being made for further travelling workshops.

Interested readers can join the discussions at www.dgroups.org/groups/c3net

The International Institute for Communication and Development (IICD) assists developing countries to realise locally owned sustainable development by harnessing the potential of information and communication technologies (ICTs). IICD realises its mission through two strategic approaches. First, Country Programmes bring local organisations together and help them to formulate and execute ICT-supported development policies and projects. The approach aims to strengthen local institutional capacities to develop and manage Country Programmes, which are currently being implemented in Bolivia, Burkina Faso, Ghana, Jamaica, Mali, Tanzania, Uganda and Zambia. Second, Thematic Networks link local and international partners working in similar areas, connecting local knowledge with global knowledge and promoting South-South and South-North exchanges. Thematic Networks focus on sectors and themes like education, health, governance, the environment, livelihood opportunities – especially agriculture – and training. These efforts are supported by various information and communication activities provided by IICD or its partners. IICD is an independent non-profit foundation, established by the Netherlands Ministry for Development Cooperation in 1997. Its core funders include the Directorate-General for Development Cooperation (DGIS), the UK Department for International Development (DFID) and the Swiss Agency for Development and Cooperation (SDC). www.iicd.org

The mandate of the **M.S. Swaminathan Research Foundation** is to impart a pro-nature, pro-poor and pro-women orientation to a job-led economic growth strategy in rural areas through harnessing science and technology for environmentally sustainable and socially equitable development. MSSRF research focuses on Coastal Systems, Biodiversity and Biotechnology, Ecotechnology and Sustainable Agriculture, Reaching the Unreached, and Education, Communication, Training and Capacity Building. The flagship project of the Informatics Group is the Information Village Research Project. Apart from the headquarters at Chennai, the Foundation has many field centres in Tamil Nadu, Pondicherry, Kerala and Orissa. The Foundation is known for its emphasis on bottom-up participatory approach which places people before technology. www.mssrf.org

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