Sustainable Initiatives

Information and Communication Technology case study

GYANDOOT, Madyha Pradesh

A network for empowerment of rural people through self-sustainable use of information and communications technology.

Introduction

This case study has been generated as part of a research programme into Information and Communication Technology (ICT) sustainability factors. Funded by the Department of International Development (DFID), the research programme identified activities that sought to benefit the poor and had an ICT component. In particular it considered programmes where ICTs had enhanced ongoing development activities, the ICT activity could be replicated without sizeable investment, and there was a measure of sustainability. Sustainability was taken to be more than financial cost recovery. Drawing from lessons learned in other development sectors, sustainability involves a combination of factors including among others, clear objectives, institutional frameworks, local capacity and development benefits. While perhaps not fulfilling all the features of a strong sustainable activity, the following case was felt to hold points of interest for the wider global development community.

Description of Case Study

Started in January 2000, Gyandoot (translated as 'Messenger of Information') is a Madhya Pradesh Government initiated project aimed at setting up an intranet system that connects rural cyber kiosks throughout Dhar district. There are three entities involved in Gyandoot: Gyandoot Samiti (NGO), the Government and the Kiosk Managers.

Funding for the project is through village committees (Panchayats) and community or private entrepreneurs. Gyandoot (which means 'purveyor of knowledge') aims to empower local people in Dhar District by giving them access to a village-level intranet (computer network). Initiated in January 2000, the network has grown to include a total of 82 information kiosks, which are either privately run by small entrepreneurs, or located in local schools.

The project has been well-publicised, and is considered one of the leading examples of community-based telecentres in India. Like comparable projects, it has had its fair share of technical difficulties, especially in the first 12-18 months, but is now beginning to make some significant impact in local villages.

The project is run by the Gyandoot Samiti (a local registered society), with support from the Dhar District Rural Development Agency (DRDA) – which has provided office space for the network server and project team, free of charge. The project also receives the endorsement of the local MP Gajendra Singh, who secured government funding for the 32 school-based telecentres (e-clubs).

Key Strategies

Through the use of district intranet kiosks to increase the facilities available to the public regarding government policies and procedures, training and education, and commerce.

Hindrances

Technical:
Limitations of connectivity, bandwidth, load shedding etc - the kiosks have suffered significant problems with unreliable power supplies. Fluctuating levels of voltage and planned outages have made it difficult to use the installed UPS (uninterruptible power supply), which could offer a few hours stand-by power at best. For example, Deepak Sharma, manager of the kiosk at Tirla (10km from Dhar), estimates that power shortages force him to close the kiosk for up to half of its normal opening hours.

Photo 1: with help from local MPs the Gyandoot project has set up 32 e-clubs in schools.

Development benefits

Soochanalayas are running as economically viable units with all the Soochaks comfortably earning their livelihood. All the commercial banks in the district are eager to finance new Soochanalaya units. Three new Soochanalaya units are sanctioned by the commercial banks for financing.

Gyandoot describes a number of examples where farmers have been able to secure better prices for their crops by taking their goods to a local market offering the highest prices, and by cutting out local middlemen. Farmers in Bagadi village, for example, were getting a rate of 300 rupees ($6) per quintal from local traders for their potato crop. On getting the rate slip from their local Gyandoot information kiosk, they could not believe that the current rate in Indore market was 400 rupees ($8) per quintal. So they hired a truck to take their produce to Indore – one hour away (50km).

Computer literacy has increased in the rural areas. This is evident from the fact that around 120 rural youths are getting trained in the kiosks. Through the increased awareness about computers and IT a number of new private computer training institutions have opened, with enrolment increasing by 60%.

Gyandoot has affected political decision-making in resource allocation with the Member of Parliament allocating Rs 25,00,000 to set up information kiosks in 3432 schools for e-education.

Socio-economic:
A considerable hindrance is the low purchasing power (40% population below the poverty line); continued drought for three years has further reduced the disposable income.

Another is the high percentage of a tribal population who are reluctant to explore new activities.

The lack of information available on the internet in the local language is also proving a hindrance to access.

What helped it Succeed

Technical:
The software is menu-driven, user friendly and is in Hindi (the local language).

Socio-economic:
Through a PRA exercise at the start of the project the selection of services was based upon the advice and the felt needs of the villagers. Thus the kiosk information is appropriate to the requirements of the local people.

The Soochanalaya (information kiosks) is run on commercial lines. The Soochak (entrepreneur) has an initial one-year agreement with the village committee. S/he does not receive any salary. At present the Soochanalayas are running as economically viable units with all the Soochaks comfortably earning their livelihood. Because of this all the commercial banks in the district are eager to finance new Soochanalaya units.

Part of the reason for the success of the Soochanalaya is the fact that the Soochaks are able to expand the services offered at the centres from just access to information to photocopying, computer training etc. This enables them to increase their income levels and make each Soochanalaya offer appropriate services to their communities.

The work gets done through the kiosks itself, thus saving time and money that is involved in visiting the government departments. Also, the work is accomplished in a set time limit boosting the confidence of citizens.

The Soochak a local youth is familiar to the user.

Sustainability factors

Objectives

To improve the efficiency, effectiveness, accountability and transparency of local government through increasing access to services, information and policy documentation by the public.

To enhance the livelihoods of the public by providing them with better access to agricultural information, commerce, education and training facilities.

Photo 2: Prakesh Rathore, outside Sardarpur Soochanalya. He runs a tea shop3 kms away that benefits from the Information kiosk with regards to purchasing.

Policy environment

Through Gyandoot the state IT policy has been re-oriented to provide rural areas with the benefits of IT through similar project models.

Institutional arrangements

The Gyandoot system is operated in conjunction with the local government, Gyandoot Samiti, village committees and individual kiosk operators. Each operator is trained by Gyandoot Samiti in the operation of the kiosk. The operator whose income is derived from using the kiosk facilities then runs the kiosk along commercial lines.

Currently Gyandoot connects 35 centres, each of which serve 25-30 surrounding villages. Each centre is situated either in village committee buildings or in local market places and villages located along main roads. 20 were opened by the Gram Panchayat (village council), and 15 were privately owned. The Gram Panchayat provided the building, telephone, electricity connection and furniture for the kiosks they opened. Each kiosk connects to the Pentium 3 Remote Access Server (RAS) which is housed in the computer room of the Zila Panchayat (District Council). The district authorities provide this space free of charge, as well as office space for the Gyandoot project manager and support staff of four.

Target groups

Villagers who require access to the information available on a daily basis.

The information available through the kiosks is provided in an appropriate format and in the local language, Hindi.

84 per cent of users are men (average). This is derived from the fact that most rural users are men whereas the urban Cyber Cafe served more women than men (70-30). Gyandoot is trying to address this.

Technology

A number of technical approaches to providing the basic network were initially evaluated. Gyandoot rejected both LAN (Local Area Network) and VSAT approaches as being too costly, opting for a simpler dial-up network using modems over existing telephone lines (POTS or Plain Old Telephone System).

The Gyandoot system is operated by one server and uses 3 programming languages (HTML, JAVA and Asp). Initially the *soonchanalayas* were only provided with access to the local

Photo 3: Chaganaial Rekkha—local flower seller. The gyandoot projects faces the challenge of encouraging more women to use their services. At present they account for only 16% of total users.

Gyandoot network, with email being limited to other local users. However overtime the entrepreneurs have demanded full Internet access, which is gradually being installed using Wireless in Local Loop (WiLL). WiLL, offers higher bandwidth, always-on connectivity, plus the opportunity for the Soochaks to generate revenue by offering local telephone services.

Each kiosk is supplied with one multimedia computer, a modem, an UPS with 4hours of back-up, a printer and a telephone.

Technical support and maintenance is provided through 4 computer officers under the District Information Officer.

Finance

The initial cost of the project was Rs. 25 lakhs (US$50,000). Any additional cost resulting from expansion has been found by private parties.

The average cost incurred by the village committees and the community in establishing the kiosk has been RS. 75,000 (US$1,500). Each kiosk operator must purchase a one-year license form the district office for Rs. 5,000. This is set against a projected annual income of Rs.36,000 from operating of the kiosk through user charges. User charges are expected to cover any maintenance and administrative costs associated with the kiosk.

Anecdote

In the village Bagdi, the people no longer feel the need of complaining about the hand pump. A complaint was made through the kiosk about the malfunctioning of the hand pump of the village, which was corrected within 3 days. Another complaint was made of the hand pump of a nearby village, which too got corrected in a week. The administration reprimanded the department with the result that the mechanic himself keeps monitoring & inquiring about the status of hand pumps. In the past complaints had to be made by the villager in person to the district headquarters. This often created problems as the villager was never sure that on reaching the district they would be able to meet with a district officer.

Points of Interest

Through enabling the local population to access government services online, corruption within the government is beginning to be highlighted and addressed.

Gyandoot's leading innovation has been in introducing a broad range of e-government services, aimed at the rural poor. These include providing access to a host of local government services at fixed cost, including driving licence applications, registration of births and deaths, application for income, caste and domicile certificates, and public complaints (eg about drinking water, functioning of local schools and village committees etc). These services cost from ten rupees each, with the local authorities promising a reply to the kiosk within seven days.

The project process

During the formation of the project proposal, a detailed RRA/PRA exercise was taken up involving the villagers and the community, an exercise involving the community, government officials and the Gyandoot team. Through this exercise it was learnt which selection of services were most required by the communities involved that could be delivered through the kiosk.

Each kiosk operator for the initial 20 centres were selected interactively by village committees and the local community. Three member panels were selected by the community who received training at their own cost at the District Council. At the end of the training, the best trainees were selected out of a panel of three to run the kiosk.

Current on-line services offered by the kiosk include E-Governance (which includes filing applications for land records, driving licenses, caste/income/domicile certificates or for getting demarcation done etc. through the kiosk); E-commerce; E-education (includes a Career Advise service and computer training); and E-agriculture (eg information on good cultivation practices of important crops grown in the district).

Other services offered include local bus and railway time tables, a district telephone directory, ambulance service information and information on training facilities and job vacancies.

Key linkages

Through the use of mass media campaigns using posters/pamphlets, TV cable network, newspapers, playing of audiocassettes etc, the district council has been able to advertise the kiosks to the local populace.

Gyandoot does have links to NGOs, but kiosks do not appear to offer links to other community development services.

Capacity

Each kiosk operator must have completed year ten in school. They receive training in operating the kiosk from Gyandoot Samiti and computer training from external providers.

Users are able to access the kiosk for training and educational purposes. Links have been made with the local schools, creating study tours and demonstrations for pupils of the Gyandoot system and its facilities.

The majority of men and women in Dhar District are not literate. In rural areas only 16 per cent of women and 42 per cent of men are literate, with these figures rising to 54 and 79 per cent respectively for urban areas.

Stakeholders Consulted

This case study information has been gathered through the assistance of Gyandoot staff, who facilitated interviews with a range of stakeholders including the project manager of Gyandoot, local farmers, Soochaks and local school pupils.

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