

Effectiveness of Grassroots ICT Projects: A Case Study of the Akshaya Project of Kerala State, India

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Abstract

This paper reports the findings of a study that examined the effectiveness of grassroots ICT projects in India. It was conducted in 2010 and focused on the Akshaya ICT Project which was launched in 2002 by the IT Mission and the Department of Science and Technology of the State of Kerala, India with voluntary tie-up with some local bodies. The core aim of the project was to make Kerala the first fully e-literate state in India. Data were collected using qualitative and quantitative methods. One hundred respondents of the district were selected and recruited through a two stage sampling technique. The study found that although over half of the respondents had heard about the project, very few were aware of the project's services. The few who accessed the services did so mainly e-payment purposes.

Key Words: *ICT, Akshaya Project, Kerala, development, e-kendra (e-centre)*

Introduction

In India, the Information and Communication Technology (ICT) revolution is far reaching and has high visibility. Its use has contributed to phenomenal growth in such areas as e-literacy, e-governance, e-commerce and e-transaction. Various ICT projects such as e-choupal, Warana, TARAhaat, and Gyandoot have enlightened and empowered Indian rural communities. With ICT at their disposal, poor rural communities are currently able to gain quick access to information about various services such as health, education, business, and employment. Thus, the anticipated benefits of any ICT for development project such as Akshaya include e-literacy, knowledge dissemination, poverty reduction, community and women's empowerment, transparency in business and other transactions, increased productivity and better health care practices.

According to Kenneth (2002), ICTs provide the basic hope in this information age because they play a dual role of, firstly, enhancing India's international economic position by building on the success of the Indian software industry and, secondly, contributing to solving the problems associated with poverty and underdevelopment in which large sections of the Indian population are still mired. Grassroots ICTs can be a significant and cost-effective way of responding to the needs of large sections of India's disadvantaged population. The challenge is to learn if, when, and how

information and communication technologies of all kinds can be the most cost-effective means to help poor people meet their basic needs and assert their fundamental rights. Sri Lankan journalist, Gunawardene (2005) has argued that thousands of pilot projects are seeded without regard to generalisability, scalability, and sustainability; implying that these projects will always require external funding to continue running and that their impact is limited. The current status of many grassroots ICT projects in India echoes this sentiment. Herold (2010) reports that “disregard [by] technology inventors and designers for the users of ICTs has resulted in disjunctures between ICTs and users” [with individual users developing] their own uses of ICTs based on the complex webs of relations and meanings in which they function as social actors” (p.243).

One of the most profitable ICT related businesses is the ICT kiosk, which, according to Dhawan (2004), provides such revenue generating services as computer education, astrology, photography and the internet. However, he notes that a number of factors, notably kiosk operator profile and personality, location of the kiosk, demographic factors, and services availability affect the business. Rama (2004) adds that significant efforts are required to design, develop and internalize the ICT solutions through well managed reengineering of back-end processes and capacity building efforts to ensure sustainability. Suitable public-private partnership models have to be adopted to ensure rapid development and cost-effective solutions.

Cultural background also affects the acceptance of Information and Communication Technology (ICT) in developing countries (Kortemann, 2005). Cultural values or demographic factors such as age, gender and education influence people’s attitudes towards the acceptance of ICT. However, Kortemann (2005) reports that a person’s decision to accept technology and take part in an ICT skills development course is strongly influenced by the level of public promotion of the project.

Schramm (1971) posits that adequate flow of information, in particular, an appropriate use of the mass media could make a contribution to national, economic, and social development. He adds that information flow could help a developing nation to mobilise resources for modernising many of its people’s life patterns and in doing so bring about the necessary social change speedily. Rogers (2003) also underlines the fact that communication has a significant role to play in the diffusion of innovations and rural development. Communication creates awareness and interest, encourages people to evaluate, try and eventually adopt an innovation.

Thus, to achieve social change people must be informed, persuaded and educated. Information must have a two-way flow so that the needs of the underdeveloped population are identified and the people can participate in the act of nation building. Schramm (1971) further says that only formal education has the potential to transfer new ideas and skills from the modernizing cities to traditional villages. Jain (2003), Anyaegbnum, Mefapulos and Moetsabi (2004) stress that the way communication is handled may lead people to accept or reject a planned development project. According to Rogers (2003), an individual’s decision to adopt or reject an innovation is contingent upon the relative advantage, compatibility, complexity or simplicity, trialability of the proposed innovation. Throughout this decision-making process communication matters.

Description of the Akshaya ICT Project

The Akshaya Project is an ICT for development project launched in 2002 jointly by the Kerala State IT Mission and the Kerala State Department of Science and Technology, with tie-ups with local bodies and voluntary agencies. Akshaya, which means perpetuating prosperity, is being implemented to address the issues to do with the digital divide in an integrated and holistic manner. The project was successfully piloted in the Malappuram city of the Kerala State in 2002. By 2010 it had been extended to all the 14 districts in the State. The major components of the project include providing ICT access to all sections of the society, developing minimum skills in all the people through functional IT Literacy training, creating relevant local contents to benefit all the interest groups.

According to the project website (<http://www.akshaya.kerala.gov.in/>), the Akshaya ICT project aims to

- develop over 5000 networked multi-purpose community technology centres, named Akshaya e-Kendras to provide ICT access to the entire population (about 31 million) of the State.
- make at least one person in each of 65 lakh (6.5 million)² families in the state e-literate.
- enhance the quality of available IT infrastructure in the State, and also by providing facilities for rural connectivity infrastructure.
- accelerate the development of local content relevant to the population.
- enable e-transaction and e-governance services through the centres.
- generate over 50,000 employment opportunities in 3 years.
- generate direct investment of over Rs. 500 crores (US\$89.429 million)³ in 3 years

Through achieving the above, the State envisions to:

- bridge the gap between the 'Information Poor and the Information Rich'
- create a society which is ready to capitalise on knowledge for economic and social development
- catalyse the development of society through Akshaya centres
- empower individuals and communities through enhanced access to information, education and communication facilities and
- integrate communities through the creation of e-networks and development of the core sectors like agriculture, health, education, industry and resources.

Run by private entrepreneurs, each centre is set up within 2 to 3 kilometres of every household and caters for around 1000-3000 families. According to Akshaya office records 2,662 Akshaya e-kendras were operational by 2010. Out of these 2,328 Akshaya e-centres (87.50%) are in rural areas.

² One lakh = 100,000 (wiki.answers.com/Q/How_many_zeros_are_their_in_one_lakh)

³ One crore = 10 million (en.wikipedia.org/wiki/Crore).

Objectives of the Study

As noted above the Akshaya ICT Project is both a business and a communication enterprise. This study concentrated on the communication part. The Akshaya is one of India's high profile and ambitious projects. It set itself the goal of providing IT services to the entire population. However, by 2010, this had not been achieved. Why this desired goal has not been attained and how much the project has affected the intended beneficiaries were the major questions the study sought to answer. Precisely the study sought to

- assess the level of awareness about the Akshaya Project amongst the intended beneficiaries
- document how the intended beneficiaries used the services offered by the project and
- identify barriers the intended beneficiaries faced in accessing the project.

Research Methods

The study used a combination of quantitative and qualitative techniques to collect data from 100 intended beneficiaries of Akshaya e-kendas in Ernakulam district of Kerala which is also known as the commercial capital of Kerala⁴. The selection of the study participants amongst the intended beneficiaries was done using a two stage sampling process. In the first stage, purposive sampling was used to select the district and survey areas based on the literacy level and length of operation of the e-Kendra in the district. In the second stage, the intended beneficiaries were selected randomly from the four zones of the district from where eight Akshaya e-kendras selected. The survey questionnaire collected data on the demographic background of the respondents; the affordability, and desirability of the Akshaya e-Kendra. The main source of qualitative information, such as the objectives of the project, were unstructured and open-ended interviews with key informants such as the e-Kendra operators, and Akshaya project officials in the Ernakulam district.

Analysis of the Findings

The data were analysed using Ms Excel to produce descriptive statistics. The charts generated and the qualitative explanations obtained during face to face interviews helped in formulating the conclusions of the study.

Awareness

The study found that in general 69% (31% rural and 38% urban) of the respondents were aware about the presence of the Akshaya project. Thus, more rural than urban respondents were aware of the ICT project.

As the chart below (Figure 1) show, were-payment was most familiar service provided by the project while the e-Kkrishi service was the least known (2%). The e-khrishi service was introduced to motivate farmers and agriculturists to improve the dwindling profession in the Kerala State⁵. This could mean that the project's objective of improving agriculture through ICT was unlikely to be achieved.

⁴ For details about the history of Kerala, visit www.ekm.kerala.gov.in

⁵ For details visit <http://www.akshaya.kerala.gov.in/index.php/platform-for-services/184>

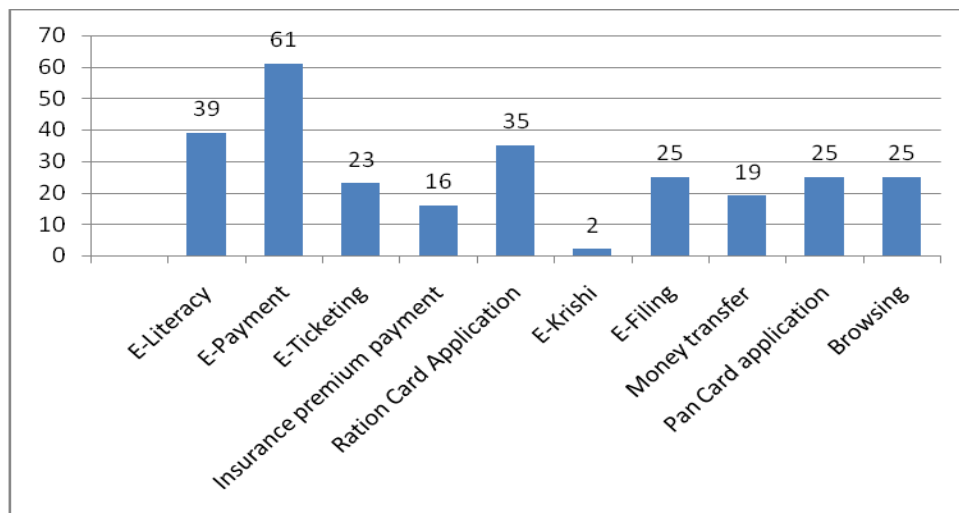


Figure 1. Percent of respondents aware of specific services of the Akshaya project (N=100)

Sources of information

Some 30.4% of the respondents reported to have learnt about the ‘Akshaya’ through Akshaya entrepreneurs and while 30.4% were informed by their or neighbours. 4.3% of them reported to have heard about Akshaya from government offices and government officials. 15.9% of the respondents gathered their knowledge about Akshaya through newspapers. Thus, friends, entrepreneurs, and, to a small extent, newspapers were the major sources of information on ICT for development in this area.

Uses and gratifications

The study also set out to learn how, in terms of frequency of visits and types of gratifications, the intended beneficiaries used the Akshaya project. It found that over half (53%) of the respondents had not yet visited any Akshaya e-Kendra for any purposes. The 47% who visited the e-Kendra reported to have done so rarely. Breaking down the findings further, one notes that some 19.1% of respondents visited the e-Kandara once in a month while 6.4% visited Akshaya centres twice in a week. Only 4.3% respondents reported to visit Akshaya centres every day. Location (rural or urban) seemed to matter because the findings of the study indicate that in rural areas, at least two percent of respondents visited Akshaya e-Kendra every day while no one did so in urban areas.

The services availed by the users were also limited. This study found that although 61% of the respondents were aware of the e-payment facility, only 48% used it to pay their utility bills and among other payments. 10% of the respondents accessed the e-literacy service while 9% of e-ticketing and browsing facilities. 8% of the respondents had applied for their pan card through Akshaya e-kendra and 5% of the respondents had applied for their ration card. Only 5% of the respondents had ever used e-filing services. No respondent had ever used the e-khrishi service although, as noted above, some 2% of respondents were aware of the service.

Challenges

The study further sought to identify the challenges the intended beneficiaries faced in accessing the Akshaya project services. As Figure 2 below shows the respondents who accessed the Akshaya services faced various challenges including limited knowledge about the project, illiteracy and unsuitability of the project ideals to local needs. The fact that no one complained about software or human intermediary unfriendliness could be an indication that the services were user friendly but the barriers lay elsewhere.

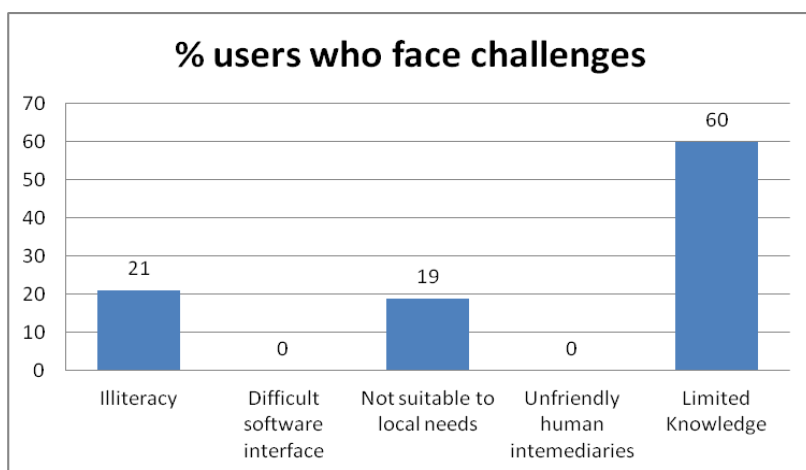


Figure 2: Challenges faced by users of Akshaya ICT project (N=47)

The majority (58.5%) of those (N=53) who never used the Akshaya services cited lack of awareness about the project as the main reason for not availing Akshaya services. 15.1% said that they did not need the services while 15.1% did not use the Akshaya because of the high service charges. Due to lack of computer literacy, 7.5% of respondents were not interested to go to Akshaya e-centres. 1.9% reported to have tried, failed and, as a result, lost interest. Another 1.9% of the respondents blamed lack of reading and writing skills for their failure to access the services.

Conclusion

The overall finding of the study is that though awareness about Akshaya ICT Project was generally high amongst the intended beneficiaries, only a few people accessed the project's component services due to such factors as high services charges, limited knowledge, illiteracy, and failed attempts

Recommendations

Information and Communication Technology will continue to expand and many more people will depend on it to improve their living standards. This is true for India as it is for the rest of developing world. The application of ICT in various sectors such as education, health, agriculture, farming and rural economic development can surely bring about development in rural areas. But findings of this study indicate that the Akshaya e-kendra is unlikely to achieve its long term goal of bridging the gap between information rich and information poor because the intended beneficiaries face a lot of

challenges. The project might have increased access to ICT in the region, but the 'development divide' between the region and the developed countries has not changed. However, this does not mean that the innovation is worthless. There is need to turn the current awareness into knowledge and practice. To achieve this, communication interventions to motivate people to adopt new technologies are necessary. One possible cause of this dismal use of the project facilities could be lack of involvement in the project of the intended beneficiaries from the beginning.

Thus, a communication strategy which combines interpersonal and multimedia channels needs to be explored and implemented. It is suggested that before and after launching any ICT initiative, the information needs of the community should be thoroughly assessed. It is the people, not the project, who actually bring up the development.

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