

OPTIMIZING CULTURAL AND ECONOMIC SECURITY

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Abstract: The People and Practices Research group at Intel Corporation has since its inception been keen on making sure that new technologies fit with the people for whom they were designed. Like some other large technology firms, Intel has recently shifted some of their focus to understanding emerging economies as new places for technology uptake. Honing this focus, the PaPR group is currently researching why some ICT4D projects are so successful and self-sustaining while others appear to collapse after a very short time. Piggybacking to various degrees on other projects in 20 plus different locations, we are hoping to produce a richer understanding and a clearer blueprint for truly bringing the benefits of ICTs to communities as a tool for development as first envisioned by so many a little over a decade ago.

We propose that many of the problems and unevenness in results with technology transfer (ICT4D) stem from the lack of understanding of what a community already possesses in its day-to-day portfolio of skills. Because the already existent cultural motifs of healthcare, formal/informal economies and social networks in a community afford people a type of security, it is critical to not disrupt this security with the introduction of new technologies.

It is commonly thought that low-infrastructure communities will blossom more fully if a good technological “cocktail” is served by a willing government or NGO. What this project is discovering, and what is addressed in this report, is that communities already have many capabilities and those must be first understood and then built upon – not destroyed – in order for ICT to be adopted and sustained. ICT4D must follow a formula of “development from below” in order to maximize successful technology adoption.

Keywords: ICT4D, Economic Security, Low Infrastructure Communities, Sustainable Development

OPTIMIZING CULTURAL AND ECONOMIC SECURITY IN THE IMPLEMENTATION OF DIGITAL DEVELOPMENT: THE CASE OF PENALOLEN, CHILE.

1. INTRODUCTION

The administrator of a program of technological change carries a heavier responsibility [than a surgeon]. Whenever he seeks to alter a people's way of life, he is dealing not with one individual, but with the well-being and happiness of generations of men and women. If his skill is poor and his judgment bad, he can destroy cooperative human relations and create hatreds that will affect uncountable number of people. If on the other hand, his skill is equal to the task, the possibility is open for creating cooperation where it did not exist and for bettering the lives of generations. (Spicer 1952:13).

The challenges facing the creation of sustainable economic development for the majority of the world's population is not a new challenge. Its roots are long, although often re-invented by new-comers to the process. One of our current research projects in the People and Practices Group at Intel Corporation – Community Based Technology Adoption – delves deeply into the question of why some ICT4D projects have been by all measures deemed successful, and why others are still struggling to survive, or have ceased to exist altogether. This paper presents some of our preliminary findings as of the end of 2006; our full results will be out in the early fall of 2007.

According to various reports, there are now over one billion internet users in the world today, and there will be 2 billion somewhere close to the year 2011 (Computer Industry Almanac, Jan. 2006). However, as everyone here knows, the vast majority of these users are located in less than fifteen countries but make up 70 percent of the users. Still, organizations such as the World Bank, the United Nations, national governmental organizations, and private donor foundations continue to energetically promote ICTs as being a powerful tool to lift many communities worldwide out of poverty. Much time, effort and money have been dedicated to these efforts, and there have been successes. Success can be defined in many ways depending on how one asks the questions: Did the hardware arrive safely? Is there a reliable electricity supply to power the technology? Is there cable for connecting to the internet, or cell phone coverage for mobile phones? Are there people with understanding of the newer technologies to maintain and sustain them? Sometimes if those questions are answered in the affirmative, then the project is deemed a success. And sometimes at that point the donor foundations and NGOs move along, rarely returning to conduct further evaluations since their budgets are tight enough as it is.

Our research is showing very clearly that it is not enough to have connectivity, nor is it enough to have affordable technology. In order for ICTs to take root in a community, the technology and all its related parts must also be sustainable and thus self-perpetuating in order for social and economic benefits to be felt and embedded. Such embedding only comes when those who design the project see the target community for the things it already has, not only for what it lacks.

The conclusions concerning the achievement of acceptable cultural change can be reasonably summarized: find out what the people want; start from where they are; consult local leaders but be sure you reach the right ones; get the participation of the people themselves; carry on with good will and avoid what has been aptly labeled elsewhere as “preconceived” behavior. (Provinse, John H. 1953.)

What we have come to refer to as “seeing the hole, not the doughnut” is a way of describing what many development projects do – they see the things that a community does not have, and they often miss what the community already has, things like the social structures, informal economies, traditional herbal healers, and the wealth of local knowledge, from boat building to cooking tamales. Oftentimes, the project only sees, for example, that there is no internet connection, but not how people succeed in communicating and renewing their community in everyday practices. We propose that by understanding these everyday practices, new technologies can better fit the people they are to serve, thus becoming integral parts of their lives, and so will be in themselves sustainable development.

Development is a teleological concept of change, that is, the concept of development suggests some purpose/goal toward which this change drives. ICT4D frequently assumes that this purpose is and should be economic development. While we will not argue that economic development should not be the purpose of ICT4D, we will suggest that the conflicting (or even antagonistic) worldviews of the various peoples affected by such programs need to be reconciled before successful ICT4D can be effected. In particular, ICT4D needs to take into account the existing economic activities of these communities, which are composed of what can be described as portfolio entrepreneurs, that is, people taking part in varied economic endeavors to make ends meet.

2. METHODS

Our work involves ethnographic studies of geographic communities in the midst of programs to deploy IP-based technologies. Our field work piggy-backs off the efforts of development agencies and non-governmental organizations that are bringing ICTs into communities for the purpose of mostly economic development. In many cases, we are not so much evaluating as collaborating. By working closely with community members, we can help development agencies to better deliver services. This work will focus on six communities, with many more communities providing additional or confirmatory material. Most of our work thus far has been in Peñalolén, Chile; Huangbaiyu, China; Theni, India; Soweto, South Africa; and North Lawndale, USA.

The primary aim of our research is to better understand the ways in which communities make decisions to adopt (or not) new technologies that have the power to change their lives. This research has involved working with various constituencies in ICT4D projects around the globe. We have observed lives and the contexts in which they are lived. We have observed and interacted with both the “objects” of the development programs and the “subjects”: the communities to receive the ICTs and the organizations delivering them, respectively. We have visited with community members in their homes and places of work, primarily to discuss their communities and the lives they live within them. We have talked about friendships, work, leisure, and goals for the future. Only secondarily did we talk about the technology

plans (community members were, in many cases, not even aware of the ICT4D project). Among the community members who have known about the plans, we have met with community activists and community leaders. We also have met with the delivery organizations in their offices and various public meetings to discuss the “how and whys” of their plans. We are analyzing the various documents created in support of these endeavors. This work is conceptualized as action research, and although our goal is to understand community change, we have also attempted to assist the development agencies in crafting more appropriate technologies and services.

3. RESULTS

3.1. A Model for Success: Peñalolén, Santiago, Chile

One community that appears to be enjoying success with the deployment of a long-term ICT4D project is the municipality of Peñalolén, Chile. Peñalolén is one of some 30 municipalities that make of the greater Santiago metropolitan area. Created as a political entity 22 years ago, it is one of the poorer municipalities in the city of almost 6 million, and one of the most ethnically diverse also. The population totals approximately 260,000 persons, the average income for Peñalolénos is about \$300 US monthly and until 2005 has one of the largest “*tomas*,” or squatter settlements, in the country.

In 1998, two computers were placed in a church basement with the objective of bringing ICTs to Peñalolén. This was the beginning of the drive to make Peñalolén a “digital community” through the use of ICTs, and was promulgated by the now-mayor of the municipality, Claudio Orrego Larrain. Helped by national initiatives to make a place for Chile in the digital world, primarily through supporting ICTs in public schools throughout the country, Orrego took on the founding of the Corporation El Encuentro (The Meeting Corporation), a non-profit organization with the mission of providing ICTs for the poor. From this beginning has blossomed some strong and so far sustainable developments in the camp of ICT4D.

Telecentres for the Community: Beginning with the telecentre at El Encuentro, there are now five additional telecentres being brought online in Peñalolén. These are being developed through the local neighborhood organizations (Juntos Vecinales), and were chosen from proposals put forth by the same neighborhood organizations. Each new telecentre will be supported through municipal funds (and other indirect private enterprise support, such as the donation of PCs) for the first year of their existence; after one year each telecentre must have in place a method of self-support. It is imagined that the telecentres will be able to offer and charge minimal amounts for classes in computing and digital literacy and other related services in order to become self-sustaining.

Digital Schools: With the cooperation of the national program Enlaces (Linkages – a program that helps develop locally relevant educational materials and curriculum for Chile's public school system in partnership with national universities), there is a grand push to 1) have the elementary schools be online and fully access the benefits of ICTs, and 2) serve secondarily as community telecentres in the evenings. One elementary school, serving the poorest children in Peñalolén, serves as a model for the others. Having a fully equipped computer lab, the school now has a WiMAX tower to power internet access, and continues to train students and community members in computer usage. Another school, this one a high school, is getting ready to launch an internet radio station to be run by the students and will broadcast not only music but other content relevant to the community of Peñalolén.

Community Radio: Linked to the oldest telecentre is Radio El Encuentro, a community radio station that broadcasts both on the FM band and on the internet to the community of Peñalolén. The broadcast content is a mix of music and talk radio that discusses issues of relevance to those in the community, and also includes a “job board” and a question and answer time, where the answers are often looked for on the internet and then rebroadcast.

Digital Employment Office Yunus: Opened in 2005, the Oficina Yunus is driving a threefold mission: to act as an employment office by accessing jobs online on a national and local level; offering coursework in computing and general job skills assessment and training; and serving as the center for microfinance for those in the community of Peñalolén who want to start a small business. One innovative service that has been created is the Contract a Peñalolóno program, where community members searching for work can post their resumes online and others in the community can browse the database and find workers.

Digital Libraries: Linked to the national program to digitize Chile’s libraries, BiblioRed, there is now one library that has 20 PCs that will all eventually be linked to the internet and thus serve as both an info-center and a telecentre for the community.

E-government: Shortly after Mayor Orrego took office, he began to form a group within the municipality’s offices known as the Digital Community Group. This group of about six to seven people has been tasked with bringing the government offices and services completely online as quickly as possible. They have created a web page for the government complete with local content and links, and have brought the municipal offices online. A Peñalolóno can access the page and pay their trash collection charges, get business permits, pay business taxes, and access a host of other information both about their community, and give feedback to government officials. Both the municipal government and now two neighborhood associations maintain blogs to keep community and organization members informed and to broadcast their events to the community at large.

4. CONCLUSIONS

It appears that the community of Peñalolén is moving strongly towards a digital future, taking advantage of the social and economic benefits that ICT4D can offer. Why this community is succeeding while others might flounder will now be discussed, along with some of the negative issues that must still be surmounted.

In the opening introduction, it was stated that successful development projects must start from “below,” from the community itself, and not be imposed from “above” without understanding that same community. Development “from above” has always faced challenges, as this way of thinking is both patronizing (outsiders knowing what is best for someone else) and very often programs are lacking in local relevance. The first question that a project should ask is what does the community want, and not necessarily assume what the community needs. One needs to see the doughnut, not the hole.

In Peñalolén, efforts to bring ICT4D were indigenous to the community. The first digital project grew out of a local church and grew with the efforts of community members working

as volunteers to bring forth what they saw as valuable for their local needs. As the political climate in the country grew more favorable for the support of ICTs, and in particular for ICT4D, Peñalolén's projects could be expanded. Finally, when the municipality elected a mayor who champions the community benefits of ICTs, true flourishing is occurring. Another side benefit is that with stronger demand for computing services, three new privately run telecentres have opened, providing both jobs and internet access and other services to more people in Peñalolén. But all these events have been almost ten years in the making. And the innovations are not without their detractors and problems.

Success for some parts of Peñalolén has not been complete. The average incomes are still too low to allow for computers to be easily obtained, and the costs of internet access are still high. Poverty in general is still a great challenge, and using a computer or looking for work on the internet will not solve this problem alone. It is difficult enough for most in Peñalolén to pay for electricity, water and food. Drug use is still common, as is alcoholism. Health care is available to all but is sub-standard. Permanent housing is still scarce. Related to ICTs, the computers at the Digital Library must wait to get online because someone stole the wireless access cards from the machines. The Employment Office Yunus needs many more teachers to prepare job searchers for new employment and for teaching basic computer use. The new telecentres are still waiting for the internet connection. While one elementary school has a new beautiful and well-used computer lab, 17 other schools have a ratio of about 100 students per one computer. And there are many in Peñalolén that are not convinced of the benefits of ICTs nor of the role of the municipality in supporting this program.

Taken together, however, it is our conviction that so far the ICT4D projects in Peñalolén have been successful, and will continue to be so in the future. We offer, in conclusion, five observations that may better other projects attempting to have the same positive outcomes:

1. ICT4D projects need time to grow and prove themselves. There must be a dedicated long-term commitment to ICTs.
2. Strong community support is needed in general, as well as more directed backing, for example, by neighborhood organizations.
3. Schools need to have a strong role so that future generations have a stake in the process.
4. Capacity building classes must be taught so that community members can both understand computing and maintain the networks.
5. The thrust of projects must be geared to local needs and local content; otherwise ICTs will never be seen as essential.

5. REFERENCES AND CITATIONS

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