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## Notes from the Field

### *Editors' Introduction*

With this essay, we are delighted to formally launch a new section in the *ITID* Forum titled "Notes from the Field." Our goal with this section is to help facilitate a more "personal" dialogue about the promises, problems, and successes in our work. We anticipate publishing mostly first-person accounts overviewing notable experiences and findings. These are not research papers, and as with all Forum material, they are not formally peer-reviewed. Instead, they are opinion pieces, which we welcome personal accounts, provocations, and pitches. In the essay here, by Akhtar Badshah of Microsoft, we hear about the Unlimited Potential program which he directs. From Dr. Badshah, we get an account of a set of recent field visits he made to a few of his program projects. He offers us a pitch of his program, some specific case experiences, and his broad observations. We are delighted to offer our readers Dr. Badshah's own Notes from the Field and welcome your feedback on this specific contribution, as well as your comments and submissions to this new Forum section. Finally, we should note that Microsoft's Unlimited Potential has been the principle financial supporter of *ITID* and provided the initial funds that allowed us to transition to Open Access.

## Unlimited Potential A Catalyst for Social and Economic Empowerment

In 2003, Microsoft launched Unlimited Potential, a long-term commitment to building basic information technology (IT) skills capacity in underserved communities worldwide. Unlimited Potential has partnered with nongovernmental organizations of all sizes to support more than 50,000 computer technology centers in more than 100 countries. Projects have ranged from a single computer set up in a cave dwelling in northern China to fully equipped training facilities in urban centers of both developed and developing countries. All these efforts share a common goal: to offer people of all ages and abilities free or low-cost access to resources that enable them to learn about computers, use the Internet, explore new careers, further their education, participate in community activities, and develop job-related technology skills.

As the director overseeing these training programs for the past five years, I have visited hundreds of our Unlimited Potential partners in more than 50 countries. I have seen firsthand how underserved people—particularly women, youth, the elderly, and the disabled—have improved their lives through participation in these programs and have witnessed a transformational impact on their community. Unlimited Potential efforts have touched the lives of more than 160 million people in just six years, and we continue to refine our approach to delivering IT skills training to

people in these communities, whether they are illiterate, functionally literate, or fully literate.

Our approach has been to partner with local nonprofits that have a track record of serving the community and bringing about change, have the trust of the community, have long-term support from other funders and partners, and are interested in learning from their experiences. We have provided more than US\$350 million in cash grants and software donations, enabling our 1,200-plus community partners to hire trainers, cover certain operational costs, run classroom and back-office computers, and teach students using a modular training curriculum that has been localized into more than 20 languages. We have subsequently developed the Digital Literacy curriculum, which is available for free in more than 30 languages in an e-learning format.

What I and others at Microsoft have observed is that IT skills training offers a path to a better future. IT skills help build self-esteem, provide an opportunity to gain knowledge, and offer a way for individuals and communities to come together. Programs that are holistic in approach and go beyond IT training to serve personal and community needs become a catalyst for social and economic empowerment.

## What Works and Why

In trying to discern what works in our technology training efforts and why, I have learned one major lesson: Technology alone cannot bring about economic and social empowerment. Four other key factors must be in place:

1. A focus on community development
2. A strong and effective intermediary organization
3. Local ownership and impact
4. Local leadership

In the following sections, I offer examples to illustrate this point. These are projects I visited on a recent trip to Australia, China, and India. On this trip, I spent most of my time in the countryside, visiting communities in which Microsoft has supported the establishment of IT training centers through the Unlimited Potential Community Technology Skills Program (UP-CTSP). These were short visits, and they admittedly involved a certain amount of the pomp and circumstance that accompany the arrival of a

visiting funder. Nonetheless, it was not difficult to discern what was really going on. Admittedly, more than a few of our efforts have not worked well, and we have learned lessons that have informed the evolution and improvement of UP-CTSP. But here my lens is colored with appreciative inquiry, to absorb positive lessons we can use to scale our impact into the future.

## Technology as a Cultural Bridge

The town of Moree in New South Wales, Australia, is a land of plenty, with huge cotton farms and many opportunities for people to work the land and provide other agricultural services. Yet within this community is an indigenous population with an unemployment rate that exceeds 30%. For these people, the air is thick with hopelessness.

I visited the Mission area of Moree, where the aboriginal communities reside largely in public housing. It is just a short drive from the town's main street, but the people might as well live thousands of miles away. Entering the Mission, you can see that some houses are well maintained, but most are in disrepair. Front yards are unkempt, many of the houses are boarded up, and some homes are simply burnt to a crisp. On the hot day when I visited, I decided to get out of the car to walk around and take pictures. As I did so, three women approached me, one of them shouting. I did not hear her clearly and continued taking pictures. She shouted again. Natalie Walker, the then-CEO of the Aboriginal Employment Strategy (AES) and my host on this visit, dashed over to tell me that the woman was asking me not to photograph her house.

In a round of introductions that followed, we learned that one of the women was an elder in the community and the mother of the other two. We informed them that we were with AES and Microsoft, and that we were there to investigate the opening of a technology learning center in Moree. We explained that this was part of Microsoft's commitment to provide IT skills and job opportunities to the indigenous community in Australia. The elder had heard us in a radio interview that morning and was interested in learning more. But her daughters, one well-dressed and the other in slightly shabbier clothing and smoking continuously, looked skeptical.

During this awkward exchange, I tried to understand why the two daughters were not interested in

learning a skill that could greatly increase their employability. They had not worked in more than 11 years and did not see any value in returning to the workforce. In short, they had given up, even while their mother remained engaged and ready for a new start. Clearly, the divide even between generations in this family was profound.

Throughout the day, I kept thinking about the women. When I visited Australia several years earlier, I had met another elder named Aunt Nora. She was 70 years old and lived in Newcastle, north of Sydney, where Microsoft had helped create an IT center for the indigenous community at Yarnteen. I met young men and women who were teaching technology skills to elders like Aunt Nora, and the elders were in turn teaching the younger generation about their cultural heritage—art, music, language, history. Together they were exchanging knowledge and strengthening their culture while creating new employment opportunities for their entire community. A contrast to Moree, indeed!

At Yarnteen, the Aboriginal community saw the IT center as far more than just a program. It was an effort to bring back the soul of the community. A student named Steve told me that he had downloaded his people's language from the Internet. What a huge difference in just two generations. From *lap lap* (loincloth) to laptop—amazing!

"If you don't know where you come from, you can't know where you're going," Paul Gordon, an IT trainer at Yarnteen, told me. All courses taught at the college align with efforts to preserve cultural identity, which provides the underlying motivation for many indigenous learners. Paul noted:

Our Aboriginal past has, historically, been dismissed. Many of our people feel they are without a past—and that affects our soul. Everybody knows the pressing problems of health, housing, and education, with IT as a crucial part of education. But it means little to our essential spirit without giving us our history—our culture.

I ended my trip to Moree in high spirits, thanks to Dick Estens, a cotton farmer who is the driving force behind AES. Dick introduced me to a young man from the indigenous community who had gone through training at the AES center and was now an intern at a bank. He was still in school and had high hopes that after graduation he could continue to live in Moree and earn a decent wage. AES staffers

are all from local communities, and with their deep knowledge of the community and its needs, they can act as the most effective change makers. Without such people, access to information cannot translate into knowledge or economic empowerment for the people of the community.

Clearly, the younger generation in places like Moree can be hard to reach, but by bringing them together with their elders, it is possible to inspire them to learn and achieve success as well as use technology to sustain their cultural heritage.

## Rabbits and Greenhouses

In the small town of Dayi, about an hour from the city of Chengdu in China's Sichuan Province, live the Rabbit King and Rabbit Queen. This couple, whose real names are Mr. Ren Xuping and Ms. Zheng Xuping, own a rabbit breeding farm and founded the Rabbit King Poverty Alleviation Research Center. The mountainous area west and north of Dayi was hit by the 2008 Sichuan earthquake that killed more than 70,000 people. In Dayi, several buildings collapsed or suffered extensive damage.

The Rabbit King and Queen, who are legendary throughout the region, started with nothing but a pair of rabbits given to them by the nonprofit organization Heifer International. From that small beginning, they built an enterprise, breeding rabbits and producing rabbit products. A few years ago, the Chinese leadership congratulated them on their success and asked them to give back to society. They launched the Rabbit King Poverty Alleviation Research Center, an institute that trains farmers in the region and beyond to breed rabbits as a business. Who knew that there was such a demand for rabbits, you might ask—as I did. As it turns out, in this part of China, rabbits are king.

I went to Chengdu to visit the Poverty Alleviation Research Center, a community technology center jointly funded by Microsoft and the Fuping Development Institute. At the center, we formally celebrated the announcement of a new Microsoft grant to the Fuping Development Institute and the China Foundation for Poverty Alleviation. The grant will be used to establish nine more technology centers in the provinces of Sichuan and Gansu to assist in creating economic opportunity in the areas hit by the 2008 earthquake.

One farmer who received IT training at the new

training center demonstrated the computer skills he had acquired and gave a presentation on how the training helps farmers improve their farming capabilities and livelihood. Over the years, many such presentations have left me feeling somewhat jaded. They can seem like contrived attempts to convince donors and visitors how well the center is doing. In this case, the farmer obviously saw my eyes glaze over, because after the presentation he asked me to follow him on a site visit.

Off we went across bumpy roads, some of them clearly damaged by the earthquake. After about an hour, we arrived at a beautiful village, with farms filling the surrounding landscape and high mountains beyond. We entered a small compound with a farm supply store, a small teahouse, and an area with its doors closed. In the teahouse, women were playing mahjong. The farmer rushed over to open the closed doors and show me into a classroom. Here in this remote village, they had established a classroom to teach farmers not only rabbit-breeding techniques but also farming techniques and basic IT skills.

As I walked in, I saw rows of desks but no computers—they keep their laptops stored away when not in use. What caught my eye was the front wall with large photographs of Communist leaders, from Stalin and Lenin to Mao and Deng. What a sight: here in remote rural China, a strong vestige of the past mixed with modernity.

On the car ride back to Dayi to visit another of the Rabbit King's centers, which also serves as a residential dormitory for students learning rabbit-breeding techniques, I reflected on my visit to a place called Ansai three years earlier.

A five-hour drive from the city of Xian and close to Inner Mongolia, Ansai is in a starkly beautiful and extremely dry region where the mountainsides are terraced for farming. On a late-December morning, we stopped at a set of dwellings that looked to be built into the mountainside. After walking from the car in the cold air, I was happy to enter a home—a small room with a huge stone bed in the center and a coal fire under it that warmed the house.

The room was crowded with people exchanging money. A loan transaction was being recorded on a computer. In the next room, facing the courtyard, several people crowded around another computer. They were exploring Web sites to investigate new farming techniques and approaches to greenhouse

farming on their terraced plots. A wizened older woman asked me to follow her outside. I was trying to photograph my surroundings, but she was impatient to show me her greenhouse along the terraced wall. She was in a hurry because she needed to remove the covering over the greenhouse to let in sunlight. She kept her greenhouse covered at night to trap the moisture.

She had her helpers remove the covering, and we squeezed through a small opening into the greenhouse, which had a translucent plastic roof and rows upon rows of tomato, eggplant, and cucumber plants. Using the Internet, community workers from the Ministry of Science and Technology had shown the local farmers how to do terrace farming in this arid environment and how to cover their greenhouses at night to retain moisture and get better yields. Computer and Internet access also allowed the farmers to keep abreast of developments in greenhouse farming and experiment with new techniques such as drip irrigation. The old woman told me that, with her earnings, she could now afford to send her children to college.

Back in the town of Ansai, we visited another computer center, this one full of students—about 70 or 80 of them, all learning basic IT skills. This kind of change is happening all across China through our partnership-based computer technology centers. Rural communities and migrant workers are getting access to information, which translates into knowledge and skills that lead to economic empowerment.

## The 72 Buffalos

In the mid-1970s, I lived and studied architecture for six years in Ahmedabad in Gujarat, India. Eight years ago, I went back for a visit after the Gujarat earthquake. On my most recent visit, in April 2009, I barely recognized the place. Driving from the airport into town, we traveled on a gleaming highway instead of the bumpy road where as a young man I had barely survived pillion riding on motorcycles and scooters. I started to wonder what had happened to the dreadful road infrastructure in India.

We drove toward the town of Vadodara, about two hours south of Ahmedabad on the national highway, and then we got on the secondary road system, which was also completely paved and smooth. After five hours of traveling southeast, we

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arrived in the village of Netrang, where the Aga Khan Rural Support Program has been operating for 20 years.

The program's technology training centers include one about 30 kilometers from Netrang in Dediapada, a smaller village of about 3,000 people. Once again, I was surprised by the quality of the roads. At the entrance to the center was a blackboard with words written in Gujarati. Even though Gujarati is my native tongue, I speak it much better than I can read it. I was told that this was a list of government job openings, along with local commodity prices. The center was full of students who were there to learn computer skills—mostly young men and women and a few middle aged. I immediately noticed that this center had electric power. The lights were on, and the computers were all powered up. A few years earlier, I had visited a village in the northern state of Uttar Pradesh where the technology center had no electricity, so the kids waited in the dark for my arrival. To conserve the battery power that ran the computers, they switched on the two PCs only after I arrived.

At the Dediapada center, we were told that most of the older kids had completed their Triple C certification—a Gujarat state requirement for government workers—which enabled many of them to get jobs. Teachers and other government officials were also coming to the center to get training and a Triple C certification—a requirement for promotion. Furthermore, the center was charging higher fees to teachers, government officials, and government workers, effectively cross-subsidizing the training for young people and farmers. The local women's council was deeply involved with the operation of the center.

A unique aspect of the Aga Khan Rural Support Program centers is that, in addition to an IT skills trainer, each has a community manager who provides updates on job openings in the area, posts commodity prices, and sends price information to farmers every morning, as a text message.

We also visited an English-language training center started by a student from the nearby village of Munkapada who had learned his computer skills at the Dediapada center. This young man was teaching English using a simple English-language computer program. Next we headed to his home village, about 30 minutes away. In this area, as in many parts of Gujarat, people keep buffalos and cows for

milk, which they sell to the local milk cooperative. Gujarat is famous for revolutionizing the collection of milk through a co-op system. With a population of less than 1,000 people, Munkapada is largely made up of mud brick houses. At the village compound, a crowd was waiting to tell us the story of the 72 buffalos.

The farmers here had wanted to buy buffalos and were trying to negotiate a price with the middlemen. But the community manager had another idea. He went on the Internet and discovered a government program—the Swarna Jayanti Gram Swarozgar Yojana (SJGSY) scheme—that would allow the villagers to negotiate better prices as a group. This led to a significantly lower price, and they bought 72 buffalos. What's more, they were able to negotiate a much higher price for their milk from the milk cooperative—18 rupees instead of 12 rupees per liter. The middlemen who had previously taken their milk and delivered it to the cooperative had mixed it with water, thereby reducing the fat content and getting a much lower price from the cooperative. The farmers subsequently used the Internet to order a machine that measures the fat content of milk and used the computer center to send the reading over the Internet to the milk cooperative. The 50% increase in earnings from the milk was having a significant economic impact on this tiny community.

## What It's All About

After a decade of experience in bringing technology training to underserved communities, we no longer question whether IT can offer value to these people. Many development experts accept that technology is relevant in developing communities around the world—and that it can, if used effectively, become a catalyst to serve basic human needs such as food, water, shelter, and healthcare. Numerous efforts around the world, funded by a multitude of organizations, bring computer access and an ever-expanding range of inexpensive mobile devices to communities of all shapes and sizes so they can draw from—and contribute to—global knowledge. No single solution has fully proven workable or become entirely financially independent or profitable. But change is happening in communities where IT centers have offered a place for skill enhancement and community development.

Through Microsoft Unlimited Potential, millions of people have gained access to information and have been able to translate that into economic benefit. The examples I have cited underscore the four factors needed for IT to function as a catalyst for economic and social empowerment:

1. **A focus on community development.** For IT skills programs to serve as a catalyst for community development, they must be more than an access point for technology. They must be a place for acquiring knowledge that leads to economic transformation. The efforts at Yarnteen and AES in Australia show how bringing the generations together around their shared culture helps spur a variety of positive changes for the community.
2. **A strong and effective intermediary organization.** An implementing organization with deep roots in the community can most effectively determine how to use technology for social and economic benefit. This is particularly important when introducing technology into communities for the first time. There is bound to be some resistance, and without the involvement of a trusted community partner, that can be hard to overcome. Thriving local organizations such as the Rabbit King and Queen's rabbit-breeding

training centers offer an inroad for introducing technology skills training.

3. **Local ownership and impact.** Successful projects require that the community be involved from the start. It is not about "build it and they will come"—it is about deep local engagement. From Moree to Ansai and Netrang, the local community has been engaged from the outset in planning, expanding, and improving technology training initiatives.
4. **Local leadership.** Success depends on people who have a vision and are willing to take risks, innovate, and work together to make change happen. Long-term viability is impossible without local people who have the drive and are willing to invest time and resources. These individuals—from Paul Gordon in Newcastle to the local women's council in Dediapada—become role models for the rest of the community and help create lasting change.

Based on my years of work and observation, I firmly believe that IT can be a catalyst for economic and social empowerment. But in the end, technology is just a tool; it is the people who make the real difference. ■