

The New „E-connectivity“ in Rural Areas and the Future of Extensionists

The Future Extensionist will be a Connector, a Linker, a Networker

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A vision

Gita had walked half an hour from their hamlet to the village center to sell a few bananas. Then she had been to the village shop to buy kerosene and some rope, and now she was on her way to the Village Tele Center (VTC). She had arranged with Shanti, her daughter, that they would meet there. Shanti goes to school, and after school she often goes to the VTC with her friends before walking back home. Sometimes they can together do their homework there, and sometimes they can even surf on the web.

Gita meets Shanti and her friends. “Mother, look, we have news from Lakshmi. She now has a baby boy”. Lakshmi is the sister of Gita who lives in another fishing village in a neighbouring district. Shanti holds the printout of an e-mail to her mother, who however has trouble reading well. “Ah, that’s good news, how is she?” “Nothing is written, I guess she is okay. And here, look, Balaram has sent a photograph and writes that is where he now works”. Balaram is the oldest son of Gita, who went to the city to find some work. They look at the printed picture of Balaram with a colleague in front of a mechanical workshop.

“And look Mother, Sundari is posted on the board. Look here on the photograph, she is in Africa, see those strange looking people around her? And she is saying that there are also fishing women in Africa and she is having very interesting discussions with them. The women there are asking how we manage our groups”. Gita smiles at the photo of small Sundari with all those tall and large african women around her. They had a good and very interesting time with Sundari last year, who had come to do some study with them on how to run groups and how to cope with the fishing.

Beside Sundari’s news to all in the VTC, there was another general notice about a band of dynamite fishers that had been seen fishing off the protected coral reefs. An aerial photograph of their boat was attached,

taken by a coastguard airplane. The notice read, that the Fishing Coop of the Province had put out a reward for any information about this boat, that would lead to an arrest. “What boat is that?” Gita asks. Shanti reads the note for her and explains. Satisfied Gita says, “Ah, so at last the coast guard are actually beginning to do something. At the last meeting with the conservation group and the coast guard, father wasn’t convinced of their promise that they will step up the surveillance. We’ll tell him this when he comes back tomorrow morning”.

“All right, good news. Now, Shanti, did you find anything about a net we could use?” The problem was, that Ramsundar, the husband of Gita, had gone out to sea last night with an improvised fishing-net. A big shark had ripped through the net of his boat-group, and they now had to manage with old nets stitched together. He had asked his wife to check at the VTC, whether there might be some spare nets around. “No, I checked with all the printouts on the wall, but I didn’t find anything. I’ve asked Krishna whether he knew anything. He said he would help us”.

Krishna was one of the two workers attached to the VTC. He was actually an extensionist who had gone through special trainings for running a VTC like this. Together they went to Krishnas room, where he was already surfing on his computer. “Ah Gita, your net. I’m looking, there is nothing in this District. But I found, that in the cooperative up in Bhaktipur they have some used nets they cannot use because their boats are under repair, and they’re hiring them out. Do you want me to contact them?” Gita says yes, so Krishna fires off an emergency e-mail to Bhaktipur post-station, with a request to run it to the cooperative and ask for somebody there to phone back. After 20 minutes Krishnas phone rings and they can fix that tomorrow Ramsundar would come and pick up a net at their cooperative. “Your husband is out at sea now, right? “Yes, up at the sandbanks... – oh, I see; that’s nearer to Bhaktipur than here. Aha! Can we use the

radio?" "If you wish, but it costs you quite a lot". "That's okay, you can take it from our VTC-account. If they can go straight to Bhaktipur and pick up the net there, that would save us a lot of effort". "Ah, wait a minute, in that case we might as well first check the weather-report too". So finally Krishna uses the VHF-radio link to communicate to one of the many boats on the sandbanks there to give a message to the group of Ramsundar, plus he tells them that according to the weather report on the website of the coast guard, there is a chance that strong winds might come sometime tomorrow afternoon. "That storm-warning reduces the price for your radio call Gita, I can book that on the fisher coop".

Gita thanks Krishna and wants to get up, but Krishna asks her about her village group, and how things are going. "Well, things are okay. We've decided to try some fish-breeding of our own." "Fish-breeding? You mean fish-rearing!" "No, one of our group has successfully bred some catfish, and we think we may want to develop that further and make a business out of it, but of course we are not sure whether it works" "Oh, Gita, but this is interesting. Last month I was in the fishery station, and they showed us their efforts at breeding fish. Now you say you've been successful yourself. I think I should come and visit your group and we can have a look at that successful member of your group. I will take my camera along. If it really looks promising, I could get you into contact with the people at the station who can help you further. By the way, there is also this other group near you at Siddanabhavi, who have successfully reared catfish. Of course they have all those large ponds there, so that's easy for them. But they didn't get enough young fish.....hm, this looks interesting. If your group decides to go for pond fish, then you should join the learning system that I manage for all the other groups in the area that are developing their pond-fisheries. Can I come to your place tomorrow? Oh wait, no, tomorrow morning you have the catch coming in, so how about day after tomorrow?" So they fix a time. "Which reminds me, Krishna, can you already see what the prices are for fish at the markets in Dharampur and at Ramnagar?" "Ah, it's a bit early, but I shall try" - and after a bit of surfing Krishna finds the newest data. "Oh, good, I'll print that out and post it on the wall outside. Oh, and I'll do that with the weather report too".

But Gita didn't get up, she remembered one more thing: "I've been thinking. We don't have the cash ready for paying the coop in Bhaktipur for renting

their net. Of course they know us, but anyhow we'll need to pay them soon. Ramsundar asked me to sell a goat or two. But goat-prices are good only in another 4 months. What do you think, can I get a credit? "Ah, of course you can apply for one. Do you have an account with the Cooperative Bank in Dharampur? No? Okay, let's see....." After a while a number of forms come out. "Okay, this is a form where you apply for an account. And here is a form for a short term small credit from the Cooperative Bank. I have nothing to do with credits, but I can help you fill out those forms, and I can fax the filled out forms back to them. Just take them home, and have a good look at them first, Shanti can help you. We can then look at it when I come and visit your place. Okay? I'm sorry, I have to leave. We have a meeting of the local government people with the conservationist group and your fishing coop for figuring out the details for the new conservation area up around the coral reefs. They've asked me to facilitate the discussions. So, good luck on your catch tomorrow, and see you day after tomorrow".

Outside the VTC Gita and Shanti meet a few other villagers from other hamlets who had come in the meantime and looked at the posted news on the board outside. They sat on the ground and ate a few bananas and chatted a few minutes, trading news. Finally Shanti and Gita hasten together along the rice-fields and ponds and coconut trees to their hamlet towards the sea.

Reality?

That was a vision. Or is it already reality? Five years ago, the above vision would have been ridiculed as an unrealistic dream. Today, various elements of the above vision have already come to be true. Things are moving fast. The fact is, that already e-mails and the internet are making fast progress into rural areas. What seems unimaginable now will become fairly realistic within two or three years. There are a number of international companies that are beginning to specialise on installing the hardware and the software for exactly the above kind of vision. The new catchword is "connectivity". Amazingly, first experiences suggest, that this kind of modern connectivity supports and enhances the local ways of information exchange.

Extension will have to learn how to use the new tools of connectivity in a way that really has an impact on low-income and remote households. Do we have an idea what skills are needed to get the maximum of

development impact out of the available hardware? What needs to be thought of, when dealing with the electronics specialists who come and very rarely understand the requirements of rural development? What exactly is “networking”? What does a new extensionist need to know, what does she need to be able to do? Let’s give it a first try to sort things out!

What is “networking” from an extensionist point of view?

Roles in networks

In extension we are talking about networks of people. It is people who are linked somehow or another in a network. When taking a close look it appears there are three distinct roles that people play in networks:

- The members: These are those people and/or organisations that are linked together in the network. Closed networks only admit certain members. Open networks are free for all to join any-time.
- The owners: These are the people and/or organisations that provide the resources to run the network.
- The moderators: Sometimes called facilitators. These are the people who operate the network on a regular basis, on behalf of the owners and to the benefit of the members.

Some people can be simultaneously in all three roles.

Types of networks

We also observe various types of networks. What do they mean for extension?

1. “Depot-Network”: Such networks are managed as a “depot” of knowledge, of experience, of ideas and links, which are then made accessible to all members. These kinds of networks have a long tradition, and can be traced back to the great library of antiquity in Alexandria, which is why these kinds of networks can also be called “alexandrian” networks. The founding idea of the library in Alexandria was to collect all the knowledge in one place, so that it becomes accessible for scholars who can then go there and study it, make their own connections, write about them, and thereby increase the body of knowledge that is available. To this day this is the basic model that underlies the organisation of knowledge in science. The linking happens when a member accesses the body of knowledge and makes his/her own new connections and links.

The networker in effect is a librarian who organises the knowledge and experience into various categories for easy access, recently also called “documentalist”, nowadays sometimes even “Website-Manager”. The networker can also help the members in their search for relevant information (recently enhanced through the various search engines on the Internet, and the tremendous capacities of electronically accessible data-bases).

These kinds of networks are by far the most frequent. There is much more information deposited in various “depots” that is ever being used. Accessing that information is the main challenge.

In our vision, Krishna has repeatedly accessed information on Depot-Networks. Of course he had learnt how to access them, and he was good:

- when he searched some sort of “board” for news about the availability of a fishing-net
- when he looked up the latest weather report
- when he looked up the price of fish on the markets

2. “Coordination-Network”: The network is used as a management tool for coordinating complex processes. Complex processes cannot be planned in detail. If they are to reach a predefined objective, these processes need to be continuously observed and guided by a coordinating body. Members of such networks are people or agencies that must combine their diverse knowledge and other resources to reach a common objective. Usually members put information about their progress into a common base (often a depot), and then get instructions or advice from the coordinator on how to continue their work. Usually coordination networks also depend on one or several depot-networks, such as data-bases and thematic news-groups.

The linking of the members happens actively through the coordinator. A lower level linking happens via the various depots. The networker is a coordinator. Often the coordinator is in a higher hierarchical level of decision-making. However, more often the coordinator facilitates the decision-making of a designated group of people (specialists or delegates) for reaching concrete operational decisions for the further work on the common objective. For extensionists these kinds of networks can often be important, when they themselves are involved as facilitators of complex decision-making processes about natural resource management.

In our vision Krishna had a meeting in mind, when he excused himself from Gita. The meeting is between various stakeholders (i.e. local government, the fishing co-operative, and conservationist groups) for figuring out the rules and bylaws and compensations for taking care of an endangered coral reef that is important for the ecology and well-fare of the whole region. He had to prepare the meeting, and always keep the right people informed about the things that are important to them. His task is to facilitate the whole decision-making process of setting up and managing this coral reef reserve.

3. "Connecting-Network": The network is managed as a turntable for facilitating the exchange of knowledge and experience among its members. Most experience is so specific to the particular conditions in which it was made, that in order to transfer it to another situation, it has to be deconstructed into its principles and elements and reconstructed in a different way to suit the new situation. Members therefore want to get into contact with other members who are making interesting experiences that may become relevant for them. They want to learn about those experiences, probably go there and discuss there with those other members, and finally reconstruct the innovation from its basic ideas for their own situation. This kind of experience exchange very much also depends on face-to-face interaction, which of course can be enhanced with e-connectivity. The networker thereby becomes a "linker", a "connector" who actively searches out interesting new experiences and gets members who are facing similar challenges into contact with each other, observes - and if possible documents - the learning that then takes place, for then connecting up further members. The network thereby becomes a learning framework for all its members. The linking is initiated through the network-connector, who then follows up on the learning process.

The networker must therefore be a highly active (and sometimes even aggressive) searcher for interesting experiences that might become relevant for other members, and then link up and connect these members. And then - again sometimes aggressively - ensure that the ensuing learning is made available to all the members in the network. Again of course, depots usually are an important tool to do this job. And even more, the face-to-face events are important among the learners. And certainly the e-connectivity can very much enhance the efficiency of such events by keeping discussions and exchange going in between the face-to-face events between members.

For extension these types of networks become very important when it comes to organising and managing learning systems. "Learning system" here means information-and-exchange systems for clearly defined groups of people in a rural area, so that they can together learn to deal with a clearly defined common challenge. What is special in rural extension with this kind of network is, that the learners are widely dispersed and often remote. This is where e-connectivity may open an exciting new window for learning for remote peoples. Unfortunately very little is known yet about how to run such learning systems, particularly for dispersed learners. We have not yet found many good examples of how this can work. Hopefully the e-connectivity will give posted extensionists the tools to run and manage such systems on behalf of the villagers.

In our vision Krishna becomes a very proactive searcher when he asks Gita about the plans of her group. As soon as he realises that here is something that can potentially be an input into the learning system that he manages, he decides to actively follow up this information, and try to recruit a new group into the system. Groups that are interested in pond-fishing have joined forces and hired Krishna to run a learning system for them (they may have gotten some funding support from some development agency, but that is none of Krishnas concern), and the defined common challenge of these groups is to learn to make a profit with their pond-fisheries.

A "Village Tele Center"

Now, let's have a look at the kind of hardware that is imaginable, and the skills required to run it. All the things that have been presented in the vision actually already exist in one or the other form in rural areas. In some places, the hardware for the above vision to happen is actually already in place (India!).

But how will it happen?

Beyond all doubt, a first phase will be with so-called VTCs, where the hardware can be located and made available for the population of a rural area. This will usually be in small towns and or large village centers, often near an administrative building or near a school, and usually near a shop or a little tea-stall. It is easy to start, and can be built up gradually:

1. A very simple VTC will just be a telephone that is accessible also outside office times.

2. Then comes a fax which can receive and send forms and the like.
3. Then there is a fairly big jump to the whole e-mail-connectivity, i.e. computer, modem, screen and a printer. A lot can already be done with this alone, including "surf by email" with the new web-for-mail servers (see BN 2/00).
4. A further step would be to arrange for enough bandwidth and line-security to allow online surfing.
5. And finally there is the possibility of linking such VTCs via Very High Frequency radios (VHF) to outlying hamlets. Modern VHF equipment is digital and can also send emails.

The costs to set up such a fully functional VTC presently appear to be about as much as an air-conditioned four-wheel-drive car costs - not much at all when considering the productive time and energy that can be saved by local people and by officials. Let's just imagine the time only Krishna loses for going to the District Center to be told that the official he wanted to meet there is out? And how about all the other people who can save trips to the district that way? Furthermore costs can be recovered at least partly. Any such VTC will immediately also be used by local people to send personal messages. Preferably a VTC runs on a commercial basis, with some public funds in it for the purposes of the public at that level (i.e. village and district).

Initial experiences suggest, that such VTCs may become some new type of community center where people meet and social life happens. This can be enhanced with open board messages. Such boards may greatly increase the transparency of dealings between various levels of government, and may therefore be an important tool for improving democratisation and decentralisation.

In our vision Krishna printed out all messages that were of a general nature for all villagers to see on the board outside the VTC. Shanti often goes there after school with her friends. And Gita took the opportunity for an informal chat with people from other hamlets. Gita will also take the news home, that finally the agreements between the coast guard, the conservation group and the fishing community appear to bear fruit, e.g. that photo of the boat of the dynamite fishers.

New extension skills?

If we look at what Krishna had been doing during our vision, we can try to figure out what kind of skills will be required to do that kind of job:

People skills

First of all no doubt the people skills of extensionists will be required even more than before. Instructivist behaviour will be even less useful than it is now. People skills remain the base of all efforts at extension in rural areas, no matter how good the e-communications may finally be.

Computer skills

No doubt the computer skills will be required, that allow this kind of networking.

Skill for managing information

Skills for accessing useful sources of information. And skills of documenting and depositing useful information at appropriate places to make them available for others. Furthermore an extensionist needs to know very well, how the decision making processes happen, i.e. which offices to contact for what.

Facilitation skills

Facilitation skills for meetings where platforms are established for work between various stakeholders or between various levels of government, or between private and public interests. These skills are probably the most difficult to achieve.

Skills for managing learning systems

Skills for managing learning systems, i.e. keeping the flow of information and the exchange of experiences going between various people in his area, and monitoring and documenting the learning that takes place.

Others

No doubt further required skills will emerge with increased experience in using e-connectivity for extension....

The extensionists who are capable of doing this are very rare at present. There is a huge training challenge ahead. However, most of these skills cannot be studied. They have to be learnt while doing the real thing. The challenge therefore is to develop learning systems for such extensionists too.

Call for cases

“Bridging the digital divide” is the catchword which has resulted in many programs beginning to look into e-connectivity for rural areas. Interest is high. However, real and hard experiences in the field are very few. In LBL we are in contact with a number of real efforts that are under way to develop e-connectivity for rural areas. We are concentrating on the skills that are required to make maximum use of the new possibilities. We want to get into contact with more people who are attempting to launch e-supported learning systems in rural areas. We are looking for systems that have a chance of going beyond a pilot application. Please take up contact with us in case you yourself are involved in such efforts, or in case you know of

interesting cases (eza@lbl.ch). Also regularly check in at the Extension BAZAAR and click on the stall “ICT” (Information and Communication Technologies) to remain informed about what is going on from our side, and to find the most recent links we have found with programs working on this challenge.

Let us together take up this challenge and learn how to support efforts for concretely making e-connectivity useful for rural people! Who joins? LBL will gladly try to manage a learning system for this challenge.

The Bazaar: <http://www.viltec.ch/bazaar/bazaar.html>
->click on “ICT”.

