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I thought I had received the best education money could buy in India and I was arrogant enough to feel I had something to offer by way of knowledge and skills in the rural areas. Until I arrived in Tilonia 14 years ago and now I am not so sure. I know I am a changed person today and that is because I went through an unlearning process where hundreds of men and women, all rural, mostly illiterate and semi-literate were my teachers. Tea shops, railway stations, hours of waiting for buses, talks in the evening on roof tops with farmers, artisans, scheduled castes, agricultural labourers, village level government functionaries and before I knew it, my education had begun. In the rural areas we make a grave mistake of confusing literacy with education. More often than not people with degrees we have found to be unemployable and only a handful use what they have learnt for constructive purposes. That is why from the very beginning we de-linked jobs with degrees and in Tilonia we have not regretted it.

We have shown it is possible to run a community health programme without doctors or nurses: to use the traditional village health system of midwives and semi-literate but trained health workers to organize family planning camps, eye camps, immunization of children and to bring down the infant mortality rate. We have used the village's own communication medium-puppets to motivate people, to make them aware of their rights, to get feedback of government development schemes and to raise resources for village development work from the community at large. The entire evening school programme, 30 schools with 1500 drop-out children from poor and scheduled caste families is run by rural people without degrees in education or formal teacher training. Tilonia has been able to show that a village boy who left school at 14 or 15 can repair and maintain hand pumps more effectively and at less expense than highly qualified engineers. Now Hand Pump Mistris (HPMs) are being used to replace the internationally designed 3 Tier System which ignores skills available in the community. Tilonia's soil and water testing laboratory is run by a village youth with basic knowledge of chemistry and with on the job training given by a scientists from ICAR: the SWRC pre-primary and nutrition programme is run by a widow without any qualifications except her experience for a job which, according to government, requires a M.Sc in nutrition. By standards set by the Ministry of Social Welfare for implementing an Integrated Child Development Services (ICDS) we should be unqualified to run the 20 balwadis we are running with village women. The fact that we have given so much importance to village resources, to the way the rural poor think, to giving financial and administrative responsibilities in planning and implementation to the rural people themselves has, needless to say, baffled a lot of people. But this is the first and most important step in educating the urban-trained, urban-educated expert on rural development whose preconceived ideas have refused to take such issues into account.

What has all this shown? What lessons are there to be learnt from Tilonia?

We need to seriously re-think on definitions and also critically examine what is happening in the name of progress and development. Take the issue of professionalism, for instance. Immediately we think of School of Social Work, of Institutes of Management, of mass production systems that churn out doctors, teachers, engineers by the thousands every year. My experience has been unhappy; a large percentage of

these ostensibly highly qualified people neither have the interest nor the inclination to work in the rural areas and their presence is destructively counter-productive. It is more than a question of over skill; it is a question of attitudes which isolates them from the rural poor. Yet we post them by the thousands in villages expecting wonders from this man or woman who looks down on the poor and considers him inferior, illiterate and backward. In fact if I have seen professionalism of any kind at work it has come from this category the urban expert call 'inferior, illiterate and backward'. By my reckoning a person who combines a combination of competence, confidence and belief is a professional. In other words 'dais' village level health workers, HPMS, 'vaid's', 'hakims', priests, puppeteers, water diviners are professionals who remain grossly under-utilised even now, in the rural areas and who could change the face of this country if we gave them credibility and support. They have a science which defies classification but if 300 million people in India believe in them and use them (from ministers to 'patwaris') then why is it that we cannot give them the support they deserve. It is overdue.

Take the second issue of self-reliance. All along we have talked of national self-reliance in food grain, equipment, industrial goods etc. but little or no thought has been given to village self-reliance. On the contrary we notice disastrous trends towards making communities more dependent (instead of independent) than ever before on government personnel, government schemes, government skills with the result inter-dependence on each other in the village is almost nonexistent. Not quite, because where the barter system prevails the dependence on each other still remains and this is still to be found among the rural poor-thank God. The rural poor still practices the message that Gandhi gave to the world through India on village self-reliance. If communities cannot participate in their own development, if no forums other than the 'Panchayats' exist, then it is obvious we are planning more for the government and less for the people. Basically it all boils down to trust; we have a system where everyone is guilty until they prove their innocence.

The issue of science and technology in rural development needs a more critical examination and wider debate. Like war is too serious an issue to be left to the generals alone, the application of science and technology left to the scientists could have disastrous consequences. To spread the scientific temper you must be an adaptable human being first, then maybe a scientist-technologist and even that is not necessary. The reason why I value this Award highly is because this selection was made by an eminent scientist who obviously had the vision to look beyond the narrow considerations of degrees and qualifications. The time has come to demystify science and technology and make it accessible, understandable and inexpensive to the rural poor.

From what I have seen at the village level, our scientists lack the ability to adjust to the pace in the rural areas. It has to be their feverish pace or not at all. The beneficiary must conform or be left behind. The scientist is baffled in an area and environment where time is of no consequence or where it in fact stands still. He is his greatest enemy because he has never been taught the value of patience. In rural areas, a combination of a slow pace and patience is crucial for understanding but it will make a scientist want to climb a wall with his bare hands.

The urban-trained scientist lacks the ability to communicate. He is so dependent on the impersonal mass media - radio, television and newspapers - that he makes a habit of using such conveniences thus himself destroying whatever little art he had of improvisation and skill to communicate face to face. It saves him from the danger of being ridiculed. He resorts to jargon where simplicity would suffice. He falls back on words because he has lost the art of communicating through action. Thus he tends to choose his

audiences carefully so that he does not expose himself too much to people who, with less qualification, may be able to see through him.

We talk of scientific temper as a way of life where everything is integrated but left to educated men. Science has been compartmentalised. Hierarchies have been created and rules and regulations have been formulated that prevent the right hand from knowing what the left is doing.

By far the greatest flaw in our technologists is their inability to confess that they can also be wrong sometimes. While trying out new ideas there is a tendency to test it under controlled laboratory conditions to the nth degree till it is ready for dissemination. If at that point a semi-literate, half starved peasant should raise a practical problem the technologists have not thought of, the predictable reactions are i) it is not a problem ii) it is explained away through jargon supported by meaningless statistics to show how the problems have already been tackled and not to worry! They do not have the grace to admit they have not thought of it. At least very few do.

If they are not prepared to confess to mistakes they are even less prepared to learn from others supposedly inferior to them. Thus bullock carts are designed without consulting the farmers, biogas plants are constructed without training or taking rural masons into confidence. Smokeless 'chulhas' are designed and tested and approved in laboratories and only thereafter rural women are consulted. Simple agricultural implements are manufactured at prohibitive costs and subsidies are given to urban- based small scale industries while village blacksmiths are not consulted and literally starve for want of work.

I am neither a scientist by qualification nor a technologist by training but a disseminator of information by experience. I like to think the rural people have trained me enough to be able to decide for them what may be good for them and what will be harmful, what may generate income without adverse effects and offer them choices of technology in simple understandable language. The choice is theirs - the users, the ultimate beneficiaries. My job is to put all the pros and cons in front of them and let them take the decision. It is to play the role of a facilitator, of a catalyst, of a midwife not a middleman. In the final analysis that is the role of voluntary agencies.

I consider the Jamnalal Bajaj Award all the more valuable and precious. By giving me this recognition it has made some of Tilonia's ideas credible and respectable. I could not have asked for more.

I will end with two lines from the Bhagwat Gita which aptly reflect my life and mission:

I am rich and well born who else is equal to me I will sacrifice I will give: in that I shall rejoice.

