

'I' for Innovation at shop floor: A Shodh Yatra in manufacturing sector¹

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Having walked for about 5000 kms., during summer, winter and autumn in different parts of the country over last eleven years, I am convinced of the pervasiveness of creative spirit in India at all levels, among all sectors but particularly so among the disadvantaged people. At the same time, the spirit of enquiry, the faith in the creative potential of common people and the ability to learn from unprivileged minds need not be restricted to informal sector. In fact, if unschooled minds can be so creative, then workers and supervisors in manufacturing sector can and should be even more creative. Perhaps, many of them are already. We may not have figured them out. Let me explain what we do during Shodh Yatras in rural areas and then see if we could replicate this process within the firms but also among the users, vendors and other actors in the supply chain.

The idea of Shodh Yatra is premised on several assumptions. Many innovators and traditional knowledge holders do not know that their knowledge matters. Having solved a problem, they get on with the life. If somebody notices their solution, they willingly share. If people choose to ignore, they don't care. Some who are aware of their innovations share them openly and thus do not try to extract any rent out of their creativity. The diffusion through word of mouth sometimes ensures that an innovation catches the fancy of people around. But many times, grassroots innovations remain localized. While searching for innovations, one does not focus on only the center of activities because on the peripheries or the margins, the pressure to discover new solutions is highest. Lesser the material resources, higher is the need to intensify knowledge resources. There may be exceptions.

Competitions for ideas among children, for recipes among women and for biodiversity related knowledge among young and old help in uncovering the local genius. Otherwise, nobody would think that a television should be four sided cubical structure so that people can sit around it, look at each other and also the programmes. A student Bappi Ray, who suggested this in a village of Bankura district, did not know that he was on the edge. He had conceived a solution for Indian style meetings and collective viewing of television in a community like atmosphere. Likewise, we have come across a lantern with a music system in Kashmir made by Ghulam Mohammad Mir and a chaff cutter with a pedal operated clutch brake in Uttar Pradesh by Kamruddin Saifi. Thousands of innovations, all over the country, convince us that if we have not discovered more innovations, it is not the failure of people as much as of our way of thinking and seeing.

The ways of *knowing, feeling and doing* are often out of sync. We know a great deal, but we feel only about a few things. And when it comes to action or doing, we choose even fewer of those things about which we feel strongly. The challenge is to change the degree of reduction. Innovators achieve that by taking their ideas and concerns more seriously than most of us. Honouring people at their doorstep not only motivates them but also makes other feel that knowledge of such honoured people might in fact be valuable. If *knowledge matters, creativity counts, innovations transform*, then *incentives inspire*. But, incentives need not be monetary and even individual. SRISTI (Society for Research and Initiatives for Sustainable Technologies and Institutions), which has been organizing Shodh Yatras for over

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a decade now, has not ever given a monetary award except to children in a few cases. And yet, it has helped build a grassroots innovation movement. National Innovation Foundation (NIF) does provide monetary awards but these constitute a very small share of the total entries received. Much of the activities of Honey Bee Network are voluntary and involve lateral learning. According respect, recognition and rewards to unknown or less known creative people can be very empowering for the people concerned. Shodh Yatras help in empowering people who may otherwise remain 'unsung'.

How do we use this approach in formal sectors?

In almost every company or firm [small or big], I have drawn blank when I ask a question about a file or a register or a database of local innovations at various levels in and around the organization. If innovations really matter, why should cataloguing them be so difficult and rare? Or is it that in most hierarchical organizations, wisdom is believed to flow from the top. Therefore, if innovations have not occurred or are not known to the top bosses, then they may not be there. Once I was invited by a large company to organize a programme on intellectual property rights. As a duty bound teacher, I suggested to do some homework. As a part of that, I wanted to go through the innovations that had taken place in the company in the past. But there was no record. After some discussion, it was realized that there were some retired people who might have knowledge of the innovations by workers, supervisors and others in the decades gone by. One such senior person, retired few years ago, was flown to IIMA where I teach to share with us his experiences. When he started describing one after another process modified by the workers and other shop floor people, we were flabbergasted. In a naïve manner, I asked whether during his service days, he had put the photograph of some of the outstanding innovators on the wall of the shop floor. I did not find any example. Do the readers think that I will find an example of this kind of recognition today. I am not so sure.

Does it mean that no innovations are taking place? I cannot believe that. If companies can outperform the competitors for such a long time and in so many fields, there must be innovations taking place in technological as well as managerial domains. If we are not learning from them, we must be very resource rich. Otherwise, a frugal organization cannot afford to waste such precious knowledge resources so rampantly. Does an innovation by a common worker put highly trained engineer supervisor in a bad light? On the contrary, the credit will go to the techno managers and supervisors if they can spot the creative act, recognize it and reward it. They will get even more credit if they replicate it. Their bosses will be blessed if they replicate or readapt the idea across different sectors and technology domains. But that does not happen very often.

In a meeting with R&D teams of large number of different companies, I asked this question as to how many examples could they give of innovations in one company of the group being used in another company, even if unrelated. There were not many. But may be, I am wrong. May be, there are knowledge or innovation crawlers going around the shop floor and like honey bees cross pollinating the minds, the manufacturing plants and the meandering rivers of ideas, thoughts and possibilities.

One should never assume that people only think about problems that emerge in the professional work place. Mind cannot be contained within the boundaries of disciplines, departments or firms. And thank God that it cannot be. One should therefore allow people

the freedom to think and conceive of ideas in any field, of any degree of complexity and howsoever crazy. Every time we solve a problem, we become a better human being. Our self esteem rises and so do our expectations. Is that the reason, organizations fear innovations. If expectations rise at the shop floor level, people at the higher level will have to work harder, be more creative and appreciative of others' ideas. Not an easy thing for the bosses.

Let me conclude by suggesting that appreciating innovations is as important, if not more, as developing the same. Once I was asked by a correspondent of New Scientist, did I innovate anything myself. Apart from a small modification in my chair to make my lower back rest better, I couldn't think of many technological innovations [barring a few lab based products]. Did I feel guilty? Not much. I had at least helped in innovating platforms where students, farmers, artisans, tribals, livestock keepers and other men and women could articulate their own creativity. If I become a stair for people to climb on, isn't it worthwhile. The innovation champions, nay, innovation Shodh Yatris should take pride in recognizing the talent of others. That indeed will transform our relationship not only with others but also with ourselves. We must encourage users of our products and services to do the same. Large number of innovations emerge when users find our designs and deliveries limited in terms of their expectation. They modify the products and services. Some of these modifications help firm gain tremendous advantage. Lot of research work on open source user-driven innovations demonstrate the potential of this source of creativity. Ask any company about the awards it has given to the users who contributed meaningful innovations. You might draw blank.

A great deal remains to be done if we want to learn from (a) ourselves i.e., from within (b) other peers, (c) common people and (d) nature. That is the reason why I take my students to Himalayas as a part of Shodh Yatra course. That is also the reason why scores of people walk together in the villages in search of creative and knowledgeable people. By recognizing them, we are really recognizing the spirit of India, the tradition of invention and innovation.