

THE IMPACT OF GLOBALIZATION ON INDUSTRY - INSTITUTE INTERACTION

FARHAD FORBES

[Note : This is key note address delivered by the author, at the III ISTE Maharashtra - Goa Section, held at CWIT, Pune on 31st October 1998.]

About the most serious issue that Indian industry faces today is its ability to compete effectively with other international firms. Most Indian firms are not globally competitive and one of the biggest challenges they face is to improve their overall competitiveness.

Several factors contribute to the lack of competitiveness of Indian companies and one way of improving competitiveness is to enhance the level of competence of the workforce.

Related to this issue of improving competitiveness let's ask ourselves a few questions.

1. WHAT DO WE NEED TO DO TO RAISE THE CALIBER OF THE WORK- FORCE IN OUR FIRMS ?

- In spite of the fact that most traditional Indian companies are over-staffed, there is also no doubt that there is still a critical need for good technical people. Companies particularly need good manufacturing

and maintenance engineers - there is no shortage of expensive equipment in Indian companies, but it is more important that the equipment is kept running and that it is used optimally.

Two things we can do :

- We need to improve the level of competence of new recruits, i.e. the new graduates being churned out from the numerous colleges and technical training institutes.
- We also need to upgrade the knowledge level of existing people in our firms on a continuous basis.

2. ASSUMING THAT GOOD ENGINEERS / TECHNICIANS FORM THE BACKBONE OF THE WORKFORCE IN MOST COMPANIES, WHAT QUALITIES SHOULD WE BE LOOKING FOR IN THESE ENGINEERS AND TECHNICIANS ?

1. We do not expect your graduates to

know all the answers when they come to us, but we do expect them to have a basic understanding of technical fundamentals.

2. We do expect them to have an ability to think for themselves, question and reason, and have the ability to analyze problems, independently.
3. We expect them to have an eye for good quality. What symbolizes "good" quality (whether for a product or their own work) needs to be taught and ingrained in them.
4. They should have an eye for cleanliness and good housekeeping. It is virtually impossible to get high quality products manufactured consistently in a dirty, disorganized factory.
5. They must be able to work effectively in teams.
6. They must have a sense of discipline. The need to follow established procedures without exception. We find that it is a less common occurrence that a product failure occurs because of ignorance on the part of the technician producing the product. It is much more likely that the failure has occurred because an established procedure was bypassed. Eg. Indians technicians are like artists - they like to improve !
7. Entrepreneurship.

3. HOW CAN WE DEVELOP THESE QUALITIES IN OUR ENGINEERS AND TECHNICIANS ?

Let's answer this question by considering what changes in approach

should occur in :

(I) Institutes and Colleges :

It would be presumptuous on my part to be telling a distinguished group of academicians like you what you should be doing in your institutes. I will only offer some suggestions for your consideration.

1. More emphasis on learning rather than on taking exams. :

We in industry are looking for people with problem solving ability, an ability to think for themselves and to question.

Consider therefore :

- Open book exams :
- having less emphasis on end of term exams and more on continuous assessment through frequent homework assignments, quizzes and project work. Besides providing a better basis of assessment, this also develops the discipline of meeting frequent deadlines on time.

2. Teach that there is dignity in labour :

Engineers must be prepared to get their hands dirty and no job should be considered below the dignity of the engineer.

3. Encourage faculty to keep up with developments in their field.

- Consulting with industry.
- Sabbaticals.

4. Provide facility for people employed in industry to take specific courses at your institutions to upgrade knowledge.

With technology changing as rap-

idly as it is, we need to upgrade our knowledge periodically. You should make it easier for people from industry to enroll in your courses.

(II) Industry :

1. Industry needs to work much more closely with institutes / colleges.

So far - lot of talk / little action !

Examples of what FM is doing.

- Final Year Engineering project awards at 3 engineering colleges in Pune.
 - Two leading academicians on Advisory Board of one of our Affiliates.
 - Research project.
2. Need to be lot more welcoming and open to provide training placement opportunities for your students.
 - Distinguish between training placement and employment placement.
 3. Provide training opportunities for faculty to interact with industry.

(III) Government Education Policy :

Encourage autonomy :

- Academic
- Financial
- Administrative

It is clear that our institutes and colleges need to equip our graduates with the skills that industry needs and the programmes need to be designed such that you provide what industry is looking for. Unfortunately, as well meaning as our educators may be, our present system of regulated technical education with centralized policy mak-

ing (especially as it becomes subject to more and more political influence) makes it extremely difficult to change.

Therefore, providing our colleges and technical institutes with autonomy would really be the right way to go.

I gather that some institutes have been provided with academic autonomy - where they are free to set their own syllabus. This is certainly a step in the right direction. But we need to go beyond just *academic* autonomy; both *financial* and *administrative* autonomy should be provided as well.

Our institutes and colleges must be more accountable to their stakeholders (i.e. to students and community). The institutes therefore need to provide flexible programmes - where students can change disciplines if they find their interests lie elsewhere. It will make it more likely that when they finally graduate they will graduate in a discipline that they are really interested in and therefore much more likely to be more competent. They need to provide strong linkages with industry through faculty / student projects and consultation that will make faculty teach topics that are more practical and relevant to industry, and also provide industry with the opportunities for upgrading the knowledge of its workforce through continuing education.

A concern sometimes expressed when considering whether to provide autonomy or not is that there may be misuse - where academic standards may be compromised, and funding misappropriated.

But market forces provide a very effective regulating mechanism.

If academic autonomy is accompanied with administrative and financial autonomy, the institute will necessarily have to balance its budget. In industry if I spend more than I earn in revenues and I know that no one is going to pump in money to cover any deficits I create, I very quickly figure out that I need to avoid expenditure that I cannot afford.

So also, any compromise in academic standards will ultimately result in compromising the reputation of your institute. An institute with a bad reputation will be less likely to place its students in industry, which ultimately may make it difficult to attract students to fill the institute in future.

Finally, let's come back to the issue of competitiveness. It's depressing to see rankings of India's competitiveness. In surveys done by agencies like the World Economic Forum we consistently rank at the bottom of countries surveyed (39th out of 48 in 1995, 50th out of 53 in 1998 - our relative position has in fact worsened in the last three years !) While you see "Made in China" labels on an exponentially growing number of products

in other parts of the world, a "Made in India" label is still a rarity.

One has the hope that this will change sometime soon and this country will take its rightful place in the company of the economic giants of the world.

As educators you have the ability to greatly influence the future of the nation's workforce and thereby influence our country's competitiveness. Working together with industry, and with the support of our policy makers, we indeed have a chance to make it happen.

Two years ago when talking to a group here, I mentioned we might someday visualize a scenario where truck drivers in Germany, France or America would all be driving TELCO trucks, that they would wear clothes made by ARVIND, that they would live in homes made of TATA steel and BIRLA cement, and would wash with GODREJ soap made at soap factories controlled by FORBES MARSHALL instruments.

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