Techno managers: role of industry institute interface

Profession, Manager

Techno Managers of Tomorrow: Role of the Academy-Industry Interface Tippana Sreevani 9/19/2008 " The study of the scientific methods and principles underlying the practice of any handicraft, industry or profession; and the application of those methods and principles of the handicraft, industry, or profession in question. The first is the primary or technological aspect of the subject; the second is its subsequent and practical application. " -1901, Lord Curzon, the then Viceroy of India The lines above and the topic reminds me of the conversation I had not very long ago, with one of my seniors from school.

Anju Sharma 23, had recently joined the software industry as a fresher in TCS a reputed IT firm after completing her Bachelors this year. Her narrative about the first few days of office were eye-opening . She says she was little exposed to such a kind of an environment. Anju feels that the skills she acquired back in her college are far behind and different from what is being demanded of her now. There is a difference in both the knowledge as well as the proficiency required. She thinks of herself as having been a 'frog in a well'. The stress here is more on the need for the Emotional Quotient rather than on the Intelligence Quotient (IQ)", as she puts it. My conversation with her speaks not only about Anju but also gives voice to the feelings and thoughts of thousands of young minds across the country. I too am at the threshold of such a transition and hence chose to put down my thoughts about this topic. The first word which caught my attention was the word ' Techno Managers'. What or who are techno managers?

Engineers dominated the corporate scene in India and abroad, before the advent of the so-called managers. The industry was for long in a state of flux. What is more important for an industry? Is it product design, engineering skills, innovative ideas that you can patent or how to market a product and finance its working? The US industry, though created on the foundation of engineering skills, had started believing that it could sell anything if it was marketed well and that it could make profits selling any product if it was financed well, before the Japanese shattered the myth.

The Japanese demonstrated that engineering was equally important, and in the process gave birth to the concept of " techno-managers". The advancement of technology in all spheres and progress towards a border-free world have all led to the growth of the so called techno-managers. Today, companies need professionals who are master of all and jack of none. Thus a techno manager is one who is technically sound and at the same time possesses excellent managerial skills. What then is the importance of an academy industry interface?

According to the National Association of Software and Services Companies(NASSCOM) every year more than 8 million people are added to the workforce . Of them only 25% of the technical graduates and 10-15% of the other graduates are employable in the IT and ITes sectors. The image of a trillion dollar economy and a billion plus population does not sync well with the present situation. According to Soumen Basu, Chairman, Manpower Inc. , an HR consultancy firm ," The Indian Education System especially the university setup has not been upgraded for years.

It has been slow in responding to the evolving needs of the industry. Most of the graduates do not meet the corporate world's requirement . The demand for specialised skill is manifold. " Also the importance of an academy industry interface can best be summarised in the words of another senior functionary of the Recruit Management Team of a leading IT Company: " They have to be taught the real thing now". It implies that, what the young engineers have brought as new learning from Institutes is at variance with the ' realities' of Business ; Industry.

Everyone of us has heard about a popular term called the generation gap. What the generation gap is to the social sphere this information gap is to the educational sphere. The gap between the industrial needs and the qualification of the passouts has come to the fore. India produces over lakhs of graduates and diplomas from over thousand approved institutes but yet there is an acute shortage of the right manpower in industries. Therefore if the technocrats of today have to become the technomanagers of tomorrow they should undergo some sort of an exposure to the white collared orld in cubicles. They must be imparted the necessary skills to make successful transitions from high school to college and from the college to workforce. Thus producing an industry-ready professional requires the student to have practical experience along with technical education. The following forms of academy industry interface can be instrumental in bridging the gap between industry and the academic institute: * Organizing Workshops, conferences and symposia with joint participation of the faculty and the industries. * Participation of experts from industry in curriculum development. Visits of

industry executives and practising engineers to the Institute for seeing research work and laboratories, discussions and delivering lectures on industrial practices, trends and experiences. * Human resource development programmes by the faculty for practising engineers. * projects and joint research programmes in industries under joint guidance of the faculty and experts from industry. * Scholarships, fellowships or internships or some sort of a practical training instituted by industries at the Institute for students.

The necessity of such forms of practical training is uncontroversial in Technical Education. It is agreed that " certain kinds of technical and practical knowledge are best learned in the workplace itself, under the guidance of experienced professionals. " Engineering, medicine and education all require similar periods of practical experience. The constellation of skills that make up " technical education" are multifaceted and complex; it is widely recognized that no one type of training can impart this knowledge nor one measurement judge its mastery. Both these are experienced sequentially by the student.

Academy Industry interfaces like internships are one of the best ways for college students to get a hands on experience. One might be thinking, Oh, I get an internship and I run errands for people all day and get them coffee. Not entirely. One might get to assist an ad agency with a commercial, or write for a web site or a broadcasting station or even learn behind the scenes activities of running a corporation. Whatever one does, no matter how small, one can get an inside look at a real life job, which gives an edge during job hunting. Not only can we get hands on experience in an industrial

etting and become part of a team, but one will also gain a valuable knowledge in one's field of study. Such an experience provides an opportunity to sharpen one's quality of work. By working in an office setting an intern can put to work all the knowledge he has learned in a classroom and improve on his oral and written communication and leadership skills. Thus it supplements classroom learning. Industry-institute interactions such as internships give the student an opportunity to gain some self-confidence and figure out what his strengths are and really shine.

It helps him to identify his weaknesses so they too can become stronger. One can also get to learn the lessons of stress and time management . In an industry everything needs to be done on time and requires a degree of competency and completeness. It is this balance between time and perfection that one can learn best. College is an amazing place to learn self-reliance and independence but an experience such as an internship is a great place to use those qualities. At the same time, college is a great place for procrastination.

Lets not deny it, most of my friends cannot get a paper done unless they start the day before it is due. An internship will help you get back that motivation. Such an industrial exposure is a great opportunity to improve oral and written communication skills. This is important because most of us are not used to interacting with a diverse population. One might meet lawyers, police officers, politicians, extremely rich people, not so rich people, teachers or other students. Each person might be different in their language, their personality, and their profession.

Interacting with people can teach us more about real world experiences faster than anything. Thus providing practical experience at industries is good for everyone involved: the student, the participating institute and the industry: the students are benefited due to exposure to current industry practices, updation is possible as and when changes occur in technology, teaching faculty get sensitized to the latest practices leading them to blend practice with usual theoretical teaching methods and institutes have new blood in the form of these aspiring young graduates.

One might argue that practicals and projects at laboratories can also create a good practical environment. " Experience is better than an experiment". Let us consider an example. Say I am running an institute which teaches one how to fish. Simulating the riverside or lakeside conditions can create a level of proficiency and awareness in a student but the extent to which it can create is always less than that created or self developed when that particular student is exposed to a real sea or a lake.

At my fishing school he is in a " controlled environment" and doing a controlled experiment under controlled conditions . Whereas when he is taken to a real mountainside lake or sea is he thrown upon himself and is on his own. He is subjected to real world conditions like the dangers of sea-creatures , or the speed of the winds, weather conditions etc. Industry interactions are very much real and expose the student to the real world. For me the prospect of such interactions between the two very important landmarks in my life sounds very exciting!

For me, it would break the monotony of classes. One can also view it as an opportunity to work with the company full-time. Even if you would not want to work with that particular company, think of all the networking you can accomplish and all of the contacts you will meet. You can also focus on gaining an edge and keeping yourself in the job market. Wouldn't all these opportunities be a wonderful chance to build your resume?? An analogy can be thought of as follows: Technical education today can be said to be incomplete without any sort of a practical training.

Formal education only serves as the foundation or the base for the career of a student . The Government (an entrepreneur investing in education) here acts like a builder or a contractor. It is technical education which forms the bricks and the raw materials with which the building is erected. Academy-Institute Interactions can then be thought of as analogous to the exterior finish of the building after which it is ready to house people. Hence they play an essential role in the " building" of a true " professional a true Techno-Manager".