"LOOK AT YOURSELF FOR EDUCATIONAL TECHNOLOGY OF TOMORROW"

* Prof. S.K. Soni

Technology has flooded with means of entertainment, information and comforts in every walk of our life. We have entered into a crazy race of acquiring more and more of such appliances and gadgets. Think of such aids we use since morning till we go to bed. If our domestic life style has changed so much over last ten years from the date of launching of transmission of colour T.V. signals, how our class-rooms are still filled with squeaking noise chalk on board and sound of teachers delivering boring lectures. Why have the students started preferring not to come to classes and wanderting in search of cheap "sure-success or-over night study book lets". Even after 40 long years after independence we could not produce much of our own indigenous technologies. Why we look for import of foreign technologies even for making simple products like washing machines and cold drinks? Why have we forgotten to analyse the fact that the same Indian Engineers and scientists do excellent research in foregn countries but fail even to manufacture "Bread" successfully in our country. This paper will not attempt to analyse the whole gamut of complex social, technological and economical factors which have resulted in to under utilisation of our physical and human resources, but would humbly submit some issues with a request to look at yourself in search of Educational Technology within yourself.

2.0. DEFINITION OF EDUCATIONAL TECHNOLOGY

Educational Technology is a term framed by two words. Technology - the creative application of science to industrial (or any practical) purposes. Science - any body of tested knowledge, which may be expressed in the form of a set of general principle. Educational Technology is a term which has been used (and abused) in so many contexts that it can mean "all" or "nothing": 'all' in the sense that any planned innovative activity in "**EDUCATION**" has at times been termed as Educational Technology and 'nothing' in the sense of **nothing new.** Controversy about the concept of education and interpretations of meaning of technology have compounded, into intellectual friction giving rise to some of the controversy surrounding "Educational Technology. For some, it is a "concrete product" which can be touched and used and for some others it is a process or software type. In fact, it is concerned with the development of learning experiences, through the application of the science of learning in human beings.

The science of human behaviour, Psychology and Sociology, are as yet quite young. Few well tested and generalisable principles exist, as compared to such Science as Physics Chemistry or even Biology. Therefore it is not surprising that some authors consider it premature to claim the existence of an all embracing technology of education. It is therefore

* Prof. of T.T.T.I.Bhopal

essential for us to look at ourselves and learn basic principles of Educational Technology. The Technical Teachers have great advantage that can adopt, adapt and easily use most of the "Educational Technology products" (hard ware). They can also design with some training, most of the software (media). Further by basic nature of technological education and training they can adopt and adapt to educational technology processes (methods, strategies and techniques) based on systems approach. So where does the difficulty lie in use of Educational Technology? For the sensible answer, probably you have to look at yourself. Educational Technology must be given its due place in the higher Technical Education, now.

3.0 SOME QUESTIONS PENDING TO BE ANSWERED BY YOU.

3.10 Why not open a Distance Technological University in each State ?

Let us accept the fact that 30 % to 50 % vacancies exist in both Government aided and privately run technical colleges and polytechnics. Let js also accept the reality that not more than 30 % to 40% students feel interested in coming to the classes. Majority of them feel confident that they can pass in the examinations of technical subjects, without attending the institutions. Under these realities and conditions the rationale of the very existence of technical institutions is being questionable. May be we need an open Technological University in every state rather than a number of Technical Institutions running contact courses. Rather these can be more effectively used as study centres and "experiences" centres where students can perform experiments in **Labs** and study in libraries. If you do not agree with the above suggestion then look at yourself and ask yourself, how long you will go on "producing" theoretical engineers and technicians which are not being happily accepted by the Indian Industries ? What will happen when multi-national companies shall manage our industries in near future ? So it is the time to awake and think what little innovations you can make planning and execution of teaching so that more progmatic and worldly wise engineers can be trained. Who would feel proud in opening their own industries and employing others rather than wait hopelessly for Government jobs ?

3.20. CAN WE LEARN FROM MEDICAL COLLEGES ?

Most of the Medical Colleges have affiliated hospitals where medical students receive practical training by observation and imitation of their professors in prescribing and administering course of appropriate treatment. And by design of town planning in most cities Engineering Colleges and Polytechnics are located far away from industrial estates. So engineers and technicians are educated and trained within a non-industrial environment. Even if we wish it is not feasible to open a big/complex industry near each Engg. College or polytechnic. Then what is the way out ? You have to think of more Industry-Institute-Interactions, exchange of faculty with practicing engineers, ensuring more planned purposeful industrial training of both teachers and students and through Continuing Education, updating the knowledge and skills of practicing engineers. Professional and purposeful interactions shall solve most of the problems of Technical Education. How to plan for more industry-institute-interaction ? May be look at yourself how you make and win friends in your social life ?

3.30 ARE WE SUPPLYING HANDICAPPED TECHNICAL PERSONNELS TO INDUSTRY ?

90 % of investment goes into the laboratories of a Technical Institution. Have you every researched to know about the amount of learning in students, taking place due to existence of laboratories ? What they learn is tested by oral tests and viva- voce. Probably we do not tend to test student's achievements in acquisition of experimental skills, engineering attitudes and interpersonal/social skills. If you have learnt, servicing your scooter or radio, analyse how you have learnt it. Obviously by doing it yourself. What was the test which indicated that you have learnt it ? Naturally your scooter or radio is working smoothly after you have repaired it. Attitudes are caught and not taught. You have acquired right type of attitudes (?) after a long apprenticeship in your family and society. So think ! What you can do in the area of laboratory based instructions from your own experiences.

3.40 CAN MEDIA HARDWARE AND SOFTWARE HELP YOU IN REDUCING YOUR TEACHING BURDEN ?

Yes ! in deed. But for this you have to do a few attempts of using them. Think ! why you plan to use slides and Over Head Projectors during conference. Probably because of simple reason that you can communicate more within a limited time. So also try a few times, teaching with the help of OHP and slide projector. Ask your students. Did they gain better with OHP and slide ? If they say yes ! In all fairness you must believe them.

What do you think about learning from your own T.V. and video programmes at your home ? Yes ! you are right, you have gained a lot from films and T.V. Try if you can lay hands on some good film or video, on safety or engg. processes and products. Plan and show them to your students. You will find that your students would want you to show more such films and video programmes. But who will provide you with hardware and software ? You have to look at your own organising abilities and resource foulness. If you wish you will certainly do it. Remember ! Even mother does not feed, unless child cries for some time.

4.0 CONCLUSION

In nut shell, there is no better trainer and resource person who can provide expert advise than you yourself. Your innovation to day may be very humble, but this humble start will go a long way to exploit principles of Educational Technology tomorrow. Probably the engineers and technicians of twenty first century will be capable enough to generate, sustain and disseminate indigenous high technologies for the benefit of whole world.

* * * * *