

ENCHANCING EDUCATIONAL LINKAGES WITH INDUSTRY

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INTRODUCTION

This paper mainly deals with what institutions can offer to industry? What motivates them to utilize the institutional services? What they look for in availing training services offered by institutions? How can institutions present themselves as resources for retraining and upgrading the skills?

Whenever someone starts thinking about linkages between industry and polytechnics, it is very easy to visualise what industry can do for polytechnics viz. providing industrial training to students and teachers, delivering guest lectures on topics related to work being done in the industry, providing facilities for industrial visits and giving ideas for student project work.

A National level Research conducted under UNDP on Industry-Polytechnic collaboration (TTTI 1982) showed that out of 21 areas of interaction industry gains only in three areas. Thus when it comes to what polytechnics can offer to industries the items of cooperation do not become obvious. Hence this paper tries to explore certain areas where polytechnics can offer assistance to industries.

WHY SHOULD THE INDUSTRY USE INSTITUTIONAL TRAINING PROGRAMMES?

While underlining the importance of training industry personnel, Mr. George Jaeger, Corporate Director of Personnel Development Cincinnati Milacron says

*" We are required to keep
a tread mill technical knowledge
running at a speed
equal to the tread mill of technical
changes" "*

Indian Society for Technical Education (ISTE) Continuing Education Project recently conducted a survey about the training needs of the industries. It revealed that millions of persons working at different levels in the industry need to be trained and retrained in the areas of job relevant subject knowledge, managerial abilities, and psychomotor skills. Though some major industries have their own training organisations to meet their needs, most industries do not have enough resources to start their own training centres. All such industries can utilize services of polytechnic in training their manpower. The polytechnics have the spare capacity, capability and resources for this purpose. In many cases these avenues remain unexplored.

In most of the cases industries look for input from institutions at invention level and have an impression that only IITs and Universities can offer know how on inventions. Polytechnics may not be able to provide inventions but they are certainly capable of giving ideas on innovations which are cost effective and will improve efficiency of industrial processes. In addition to the innovations, due to the change of technology, opening up of the market due to new industrial and import export policy with emphasis on export, TQM

and application of ISO 9000, industry needs to train its manpower at all levels. In most of the industries the large number of technicians are employed for supervisory level work. They all need an update, whether they work in a small scale industry or a very large industry. A quote from Mr. AGT Chubb, Chairman Foseco PIC UK explains it nicely.

"Every morning in Africa, a gazelle wakes up it knows, it must run faster than the fastest lion or it will be killed.

Every morning a lion wakes up, it knows, it must over run the slowest gazelle or it will starve to death. It does not matter whether you are lion or a gazelle. When the sun comes up, you'd better be running".

Doing better than what one is doing is a must if one has to stand the competition, and for that training and retraining are essential. In Sanskrit they say **Sheelam Param Sadhanam !** ' Training is the path of perfection'. Polytechnics can certainly help on this aspect.

WHAT INDUSTRY LOOKS FOR IN TRAINING SERVICES?

- The first expectation is tailor made programmes to suit exact needs of the industry.
- The training should be affordable i.e. it should be cost effective.
- Proximity is another factor which the industry looks for. If the training can be provided in their premises or at least in their town it will be preferable.
- Suitable timings - morning, evening, week ends, holidays are preferred.
- Duration of the training should be optimum. If the training is spread over a long period of time, the industry will not spare their employees.

All these expectations can be fulfilled by polytechnics for training technician level manpower, because they have the

resources and the knowhow. These are being enhanced under the World Bank Assisted Project. The senior faculty of polytechnics are getting trained in training technology, as specialists in Curriculum Development, Instructional System Design, Educational Technology, Entrepreneurship Development, Management of Human Resources etc. so that they are now in a position to take up training as turn key jobs. They can now scientifically design training, starting from assessing the needs, developing the curriculum and formulating and prioritising objectives for the training, designing the relevant specific instructional material either for self learning or for group instruction to suit the requirements of a particular industry, conducting the course and assessing the performance. The last stage will lead to identification of need for further training. Such courses can be conducted within the industry premises or any other suitable location including polytechnic at suitable time and duration. Examples of such training courses are series of courses conducted by TTTI Bhopal for Ahmedabad Electricity Co. Ltd. including developing curriculum for training, one day course on Organisational Communication for Bajaj Tempo, one week courses for Western Coal Fields at Nagpur and Bhopal, courses for State Bank of India and UCO Bank, three day course for Air Force and series of courses for Border Security Force and BHEL, courses on use of Under Ream Piles for PWD and Housing Board, on Electrical Safety for MPEB, and other industries, and Optical Fibres.

One under utilised aspect is media design. Industries would love to use the capability of polytechnic faculty in designing media for their customer training, product promotion or for their staff training. Polytechnics can design OHP transparencies, prepare tape slide sequenes and produce video programmes as per need. Examples of such

collaboration is a video programmes produced for BHEL on drilling rig and on Energy Conversation for Railways and Urja Vikas Nigam, transparencies prepared for Western Coal Fields, video recording of operations for Medical College, & audio tape for HCL Ltd., by TTTI Bhopal. The polytechnics have the know how and also have resources which are being augmented under World Bank Assisted Project.

HOW CAN POLYTECHNICS 'SELL' THEMSELVES TO INDUSTRY?

This can be done through brochures, circulars, personal letters, arranging meetings and seminars, visits to industries, using professional forums like Indian Society for Training and Development (ISTD), Indian Society for Technical Education (ISTE), Confederation of Indian Industry (CII) etc. Another way to promote polytechnic services is developing data base of industries and their needs. If polytechnics have to present themselves as viable resources they must update their equipment, human resources and their competencies. Fortunately action on all these has already started.

There are other ways in which a polytechnic can help such as

- Creating an identity unique to the Institution specialising in a particular discipline. In other words developing as a centre of excellence in a particular field, built around faculty strengths and special interest.
- Consultancies right from as simple as design of trusses and columns for factory sheds to CAD-CAM.
- Writing of papers jointly with people from industries.
- Co-opting industry personnel on advisory body of the institute.
- Writing instructional modules jointly
- Exchange of personnel for a specific period. This will bring in long term benefits to both.
- Starting a production centre in polytechnics.

It must be clear that when the industries start gaining from polytechnics then and only then meaningful linkages can be established and the polytechnic outreach will be purposeful. At present we have Industrial Liaison Officers in each polytechnic, tomorrow there will be Education Liaison Officers in Industries. We all must look forward and work towards that future positively.

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