THE TECHNICAL TEACHER TRAINING INSTITUTES IN INDIA - SOME FUTURE PERSPECTIVES -

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- Editor

ABSTRACT

The four Technical Training Institutes in India at Bhopal, Calcutta, Chandigarh and Chennai have been serving the cause of Technician Education in India for the past 30 years quite admirably providing the much needed resource and support services. They have introduced several innovations in the system which have come to stay and which are now much sought after in other systems as well. Yet, the expectations from these institutions far exceeds the achievements and the future scenario is likely to consist of greater challenge and newer thrusts. This article attempts briefly to list out some of these future roles and responsibilities of these institutions in the initial years of the 21st century.

1.0 HISTORICAL BACKGROUND :

During the late 1960s, when the Technician Education system in the country was facing an acute problem of unemployment of its passouts, the Govt. of India sought the help of the British and Dutch Govt. for starting the four Technical Teacher Training Institutes at Bhopal, Calcutta, Chandigarh and Chennai with the intention of offering a systematic training programmes to Polytechnics teachers. The improved competencies of the teachers were expected to enhance the quality of the student output and as a result, their employment prospects were expected to be significantly improved. In doing so, they have followed the pattern already available in England by way of Colleges of Education (Technical) and this was replicated in India by having one institute for each of the four geographical regions of the country.

At a time when teacher-training was limited solely to teachers of primary and secondary schools almost all over the world, and one could become a

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teacher in Higher Education merely by virtue of acquiring more degrees, the extension of the teacher-training concept to post-secondary education was, in fact, the most significant innovation brought about by the TTTIs. This example is now being replicated in many other sub-systems of professional education both in India and other developing countries. With few examples to go by, the TTTIs have, over the years, succeeded in evolving a pattern of teacher training suitable to the Technician Education system in the country with all its complexities and limitations and gained a wealth of experience in the process.

Very soon, it was realized that training teachers of polytechnics was not enough, and many other measures are needed to improve the system of Technician Education. Thus over the years, many other related activities were added to the mandate of the TTTIs - Curriculum Development, Preparation of Instructional materials and teaching aids, Publication of text-books, Training in Education Management, Initiating Educational Research Activities, student support services such as Guidance and Counseling, Industrial Liaison and Placement, Computer Education, Film and Video production etc. to name only a few.

Simultaneously, development assistance was coming in, both in bilateral and multilateral form, from several agencies for the improvement of Technician Education and TTTIs were naturally chosen as the facilitators for such assistance to improve the infrastructure and facilities both within the TTTIs and the polytechnics. Thus, the spectrum of activities of these institutes had widened so much that it becomes now a total misnomer to call them 'Teacher Training Institutes' and several requests were made to rename these institutes more appropriately. But for some inexplicable reasons, this was not done so far and the institutes are carrying on with a label unrelated to their operations and negatively effecting their corporate image and reputation.

2.0 STRENGTH OF THE T.T.T.I.s :

By choosing to work in a totally new and unexplored area and by accepting to operate on a course beset with controversies over Centre-State relationship and responsibilities in a democratic set-up, the TTTIs and their faculty have accepted several challenges totally alien to other instruction in the system and achieved a fair amount of success, thereby developing certain strengths and expertise which are not likely to be found elsewhere in the country, some of these strengths could be listed as :

- Ability to fuse Pedagogical principles and philosophies with engineering subjects and evolve teaching and learning models useful for technical education applicable at all levels.
- Demonstrated effectively that 'Teaching' is a separate profession by itself and no teacher can operate effectively in any professional subject discipline without undergoing a formalized teacher training programme.
- Ability to tune themselves to the ever-changing needs and demands of the system and generate solution

to its complex problems using a systems approach and with a holistic view.

- Ability to foresee the impact of new technologies and developments like computerization and management and prepared teachers and administrators to face challenges arising out of their assimilation into the system.
- Ability to strengthen the linkages of polytechnics with Rural Society and Industry and Develop strategies to involve polytechnics effectively in such activities.

The inevitable outcome of this was that its assistance and involvement was much sought after not only by the Govt. of India in executing several other schemes in the Ministry of HRD and other ministries, but also by other International agencies such as UNESCO, CPSC etc. both at the institutional and at individual levels. The execution of The World Bank Assisted Project, Canada, Indian Institutional Co-operation Project, and the German Assistance Project have been entrusted to the TTTIs and their faculty primarily for these very reasons. Some of the TTTIs are also utilizing their expertise to organize Teacher Training Programmes for teachers in Technical and Vocational Education from other developing countries.

3.0 PROBLEMS AND CONSTRAINTS:

Despite all the above spectacular successes and achievement, the TTTIs have their own share of problems and constraints commonly associated with any institutions controlled wholly by a government machinery :

- Non availability of autonomy in operation to the extent needed.
- Lack of recognition by the Govt. of India of its special and uncommon status resulting in assignment of parity with normal engineering colleges while deciding norms for staff.
- Inability to respond fast enough to meet the varying demands of its clientele.
- Non-availability of a proper policy in respect of teacher training in Technician Education at the national and state levels. (Ref. 1).
- Inability of the Govt. of India to impress upon the states governments to make teacher training either compulsory or provide sufficient incentives to trained teachers.
- Lack of uniformity in staffing and other norms between the TTTIs resulting in staff demotivation.
- Increased indiscipline an unionism in certain sections of staff and other employees.
- Arbitrary change in management and control from MHRD to AICTE and vice-versa and resulting dislocations of works etc.

At a time when the institutions are being strengthened under the World Bank Project to face new challenges in the coming decades, these organizational and policy constraints faced by the TTTIs need to be removed expeditiously to increase their operational flexibility.

4.0 LIKELY SCENARIO IN THE NEAR FUTURE :

In the immediate future extending into the early part of the 21st century, the TTTIs will have to brace themselves up to meet the emerging scenario in the polytechnic system characterized by the following development :

1. There will be a rapid growth in private institutions in the country and the number of teachers to be trained will be on the increase. TTTIs will have to evolve strategies to cater to this large increase in demand. The courses will be paid for, but appropriate norms for payment have to be evolved at national level and followed.
2. The increase in the work load as above will make it necessary for each TTTI to establish Extension Centres in each state and cater to the specific needs of state. Thus, a pattern of shifting of routine training activities to the extension centres will have to emerge and the main TTTIs will have to concentrate on regional level and national activities. The strengthening of existing extension centres will be a corollary to this policy.
3. The four TTTIs will need to operate in a co-ordinated manner offering standardized courses in a modular pattern under the credit system. Teachers from any part of the country should have the flexibility to attend any courses at any institute as per his own convenience and accumulate credits which will ultimately lead to the award of a Degree or Diploma recognized by all four institutes. The institutes will have to jointly evolve such a pattern to facilitate staff development in a manner consistent with convenience and career aspirations of polytechnic teachers.
4. There will be a distinct shift in courses towards high technology areas and the demand for courses in these areas is bound to increase. A greater thrust in a planned manner to develop curricula, instructional materials, evaluations instruments, teaching aids and media packages in these areas will be required. A new addition to this list is Environmental protection and TTTIs will have to invest in developing expertise in this area so as to be able to help polytechnics play a more significant role. Some essential components of Environmental Protection will have to be included in all Teacher Training courses organized at the TTTIs also as mandated by the World Bank in the Project.
5. Continuous reduction in budget allocation by the Govt. of India will force TTTIs to explore ways and means to promote Internal Revenue Generation. Even for Govt. institutions the age old practice of giving training free of cost will have to be given the go bye. Increased students fees and other charges should be utilized to pay for staff development cost. Technician Education policy needs to be modified suitably to facilitate this approach.
6. As a corollary to the above, TTTIs

will have to identify their strength and prepare plans to cash in on these strength to promote Internal Revenue Generation. This could be by way of bidding for projects from other ministries, in Rural Development Agencies and Agencies related to Training and Development in diverse professional areas.

7. In this era of information technology, polytechnics will be left behind if they are not modernized to take full advantage of this medium. TTTIs will therefore have to assist in providing access to information highways by all polytechnics and produce the necessary multi-media computer software for learning engineering subject both in the formal and distance education modes.

8. With ever increasing demand for technician education, it will soon become uneconomical and unviable to continue with the formalized system of starting new polytechnics (either govt. or private) to meet future demands. Catering to these additional demands through Distance Education will therefore become inevitable. The TTTIs will have to foresee this situation and come out with a suitable framework for Correspondence Cum Contact programmes at least in selected disciplines and polytechnics. R & D work in this critical area will have to be taken up by the TTTIs.

9. Centres of Excellence (or High Technology Centres) will soon have to be established at each TTTI (without duplication) and each of these centres should form the nucleus of Technician courses to be started anywhere in the country.

4.0 SOME OTHER STRUCTURAL CHANGES SUGGESTED :

(a) The recommendations of the Review Committee proposing a change in the name of the TTTIs to "Regional Institute of Technical Education and Research" should be accepted and implemented expeditiously to dispel the notion that they are mere teacher training colleges.

(b) The institutes should be accorded 'Deemed University' status and allowed to offer their own structured Degree, Post-graduate and Doctoral programmes based on demand and thus give a major boost to research activities in Technical Education. There can be one central academic office (located at one of the TTTIs) for all four institutes for record keeping and award of degrees / diplomas.

(c) As a corollary to the above, all four institutes must evolve commonly applicable programmes whose structure has enough flexibility to provide for enough variation in elective subjects offered in accordance with the expertise available in each institution.

(d) Rules have to be made more flexible such that any teacher any - where in India can register at any institute and take courses from any institution but will obtain the same degree from one centralize agency.

(e) All courses at the TTTIs should be

made modular and credit based. The type of degree one obtains will depend upon the total number of credits accumulated over a specified time frame.

(f) All TTTIs will include an evaluation element in their QIP short courses and allot credits to participating teachers so that these credits could also be accumulated for obtaining a Diploma or Degree. Each teacher trainee will be supplied with a computerised credit card containing the number of credits earned by him which he carries with him and get endorsements thereon and finally when the required credits are accumulated he becomes eligible for the award of a degree or diploma. This will enable trainees to accumulate credits without actually staying in the TTTIs for long periods as at present and will prove quite attractive.

(g) Admission to polytechnics are now done through entrance examination in each state separately. This system should soon be replaced by a Common Entrance Examination conducted jointly by the four TTTIs at national level (as in the case of IITs) and this All India or State level ranking should be utilized by each institution or State Govt. for admitting students to polytechnics. The MHRD should persuade the states to accept such a uniform system and the TTTIs should be entrusted the job of conducting these exams. and announcing the ranks.

Such works could also be entrusted to the NPIU of the World Bank Project, if the Govt. of India decides to continue its operation (with any other name) beyond the project period (Ref. 2)

5.0 CONCLUSION :

Although by sheer accident, if not by design, the Govt. of India has created and developed these four TTTIs over the past 30 years and brought them upto a level where they have achieved international reputation and respect, at this stage, these institution need to be supported by a positive policy and complete autonomy so that they can discharge their responsibilities to the Technician Education system in a befitting manner. The institutes and their staff should also continue the good work already done and strive to provide the required leadership to the system by enhancing quality, accountability and relevance to the changing needs of industry in the 21st century.

6.0 REFERENCES :

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