

TTTI EXTENSION CENTRE PUNE, PAST-PRESENT-FUTURE

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1.0. BACKGROUND HISTORY :

When Govt. of India established four Technical Teachers' Training Institutes in the country, Govt. of Maharashtra decided to establish its own Technical Teachers' Training College (TTTC) in 1965. This was established at Karad and subsequently it was shifted to Pune in 1971.

In the initial stages, long term programmes were organized for fresh degree and diploma holders who were selected by Maharashtra Public Service Commission. These programmes were intended to provide pedagogical training, industrial training and content updating. This provided well trained teachers to the technical education system. Due to recession in industrial sector in seventies the demand for diploma holders reduced and it resulted in stoppage of recruitment of fresh teachers through MPSC. Under the circumstances focus of TTTC was shifted to provide training to inservice teachers.

Review of inservice teachers indicated that there were large number of

teachers, holding position of assistant lecturers and carrying out teaching activity without any career prospects. Govt. formulated a policy to design one year programme leading to Diploma in Technical teaching and considered this qualification as eligible for the post of lecturer. Many teachers took the advantage and subsequently became lecturers. This diploma programme was well designed by TTTC which bridged the gap of theoretical contents and also provided industrial as well as pedagogical training. Diploma certificate was awarded by the Board of Tech. Exam. M. S. Mumbai.

Simultaneously TTTC in collaboration with Board of Technical Examinations undertook project of curriculum revision on scientific basis. Many teachers and industry experts were involved in the revision process. In addition many short term programmes were organized in the areas of assessment, management and content updating.

In late seventies the then secretary of technical education, looking to facilities at TTTI Bhopal and financial

support by Govt. of India, thought it appropriate to close the state TTTC and establish Extension Centre of Bhopal at Pune. Accordingly TTTI Extension Centre Pune was established on 10th June 1980.

2.0 PAST CONTRIBUTIONS (1980-1992) :

An advisory committee was formed at the time of establishment of Extension Centre Pune to provide directions for its functioning. Under the guidance of parent institute at Bhopal and the advisory committee, staff development activities were planned and organized at the extension centre. Faculty from Bhopal contributed in designing and conducting need based programmes at Bhopal, Pune and selected polytechnics in the state. Major contributions of the extension centre in the development and growth of polytechnic education system in Maharashtra State are highlighted below :

• Diploma in Technical Teaching :

The teachers from Govt. & Govt. aided polytechnics, who were diploma holders were provided an opportunity to upgrade their qualification through one year programme - Diploma in Technical Teaching. The diploma certificate was awarded by TTTI Bhopal. About 40 teachers were benefited by this programme.

Similar one year programme was designed on vocational pattern for teachers of self financing polytechnics on their request. About 35 teachers completed the diploma.

• Curriculum Revision :

In 1983 Govt. of Maharashtra

through a policy encouraged private organizations to start engineering colleges and polytechnics on self financing basis. At this juncture Board of Technical Examinations decided to switch over from semester system to yearly pattern. Extension Centre took initiative of revising the curriculum and conducted number of workshops. The focus of revision was on objective and skill oriented curriculum with pre-planned examination reforms. Curricula for all diploma programmes were revised. many experienced teachers and industry experts contributed in this revision exercise.

• Examination Reforms :

With the introduction of revised curriculum for yearly pattern a total re-vamping was undertaken in the examination system. A model was evolved to bring in validity and reliability in setting of question papers through specification table. Number of workshops were conducted for the paper setters. Specimen question papers were made available to the students while implementing these reforms. Further research study was also conducted by extension centre faculty. These reforms have improved the standard of examination.

• Auto - Poly Project :

Govt. of Maharashtra had granted autonomy to Govt. aided polytechnics. TTTI Bhopal launched the project for some autonomous and non autonomous polytechnics (likely to become autonomous) through British consultants. Through this project institutional building activities were undertaken in different areas. The project period was of three years-1983 to 1986. It helped

project polytechnics to establish their unique identity.

- **Laboratory manual Project :**

With the introduction of objective and skill oriented curriculum, this project of developing laboratory manuals was undertaken by extension centres faculty. Experienced teachers were trained to design variety of laboratory experiences to achieve predetermined goals. Initially a pilot tryout was done at eight polytechnics and after conducting action research on implementation of manuals, these manuals were revised. Revised manuals were made available to all interested polytechnics. Through this project 17 laboratory manuals were developed and more than 10,000 students were benefited.

- **Induction Programmes for Newly Recruited Staff :**

Recognizing importance of training staff in education technology for improving quality of education, faculty at extension centre designed induction programmes in collaboration with faculty at Bhopal. Induction programmes were in two phases of four weeks duration each. Director of Technical education appreciated the plan and made it compulsory for newly recruited teachers to complete two phases. Induction programmes were designed to equip the young teachers with education psychology, theories of learning, class room communication, developing teaching aids, preparing lesson plans, preparing good questions etc. Efforts were made to inculcate professionalism in teachers through integrated approach of developing personality of teachers. These ef-

forts can be considered as key contribution for the development of polytechnic education system.

- **Teacher Attitude Test and Recruitment of Teachers :**

One of the unique contribution by the faculty at extension centre is the research on teacher attitudes. Faculty designed teacher attitude test by following all the norms of developing research instrument. The test was administered on nearly 800 teachers from polytechnics in Maharashtra state. The data was analysed and findings were reported and published in journal.

As a follow up of the research, Director of Technological education, Maharashtra State desired to use the test for recruiting teachers in polytechnics initially. Faculty at extension centre accepted the challenging task and administered the test on the candidates and made result available to interviewing panel within one hour after the test. These tests were conducted at regional head quarters where recruitment was scheduled.

Further, satisfied with the usefulness of the attitude test, Director entrusted task of designing content test along with attitude test for the recruitment of teachers in polytechnics and engineering colleges. Faculty designed and conducted relevant tests efficiently.

- **Learning to Learn Skills Development :**

For effective participation of students in teaching-learning process AICTE recommended states to plan 4-5 periods for week as Students Centered Activities. Faculty at Extension Centre

took initiative and prepared conceptual paper for the consideration of Board of Technical Examinations (BTE). Faculty conducted series of programmes for polytechnic teachers in order to introduce integrated activities in polytechnics. This project helped teachers to improve the quality of passouts. The present curriculum of BTE includes these concepts in an integrated manner.

• **Enhancement of Qualification by Faculty :**

While making contributions to the development of polytechnic education system two faculty members - prof. V. S. Vaidya and Prof. R. S. Mahashabde exerted themselves for obtaining Doctoral Degree in education. The study at doctoral level provided opportunity to them in conducting researches and utilizing research findings for the development and growth of polytechnic education system.

The area of study for Doctoral work of Dr. V. S. Vaidya was evaluation and the topic of his Ph.D. thesis was

"Design and standardization of Mechanical Comprehension test."

Dr. R. S. Mahashabde worked in the field of education management and title of his Ph.D. thesis was,

"Study of Relationship between Leadership Effectiveness of Principals of polytechnics in Maharashtra state and

- (i) institutional climate
- (ii) teachers' moral and job satisfaction
- (iii) students' academic achievement."

3.0 PRESENT CONTRIBUTIONS (1992-DATE) :

Govt. of India launched World

bank Assisted project for development of Technician Education in the country in 1991. This project was in two phases and Maharashtra State was included in phase II. National Project Implementation Unit (NPIU) was established for preparing Detailed Project Report (DPR) and provided guidelines to the states. While planning for phase I states was in progress. Extension Centre took initiative to educate officials at directorate level and also principals of polytechnics about philosophy and methodology of developing DPRs. A number of workshops were conducted to formulate conceptual frame work.

Faculty at extension centre was actively involved in all the preparatory activities. Following the broad guidelines provided by NPIU, the DPR for Maharashtra State had some special features with long term vision of quality education. Such special features and their present nature of functioning is highlighted below.

• **Lead Centres :**

In view of geographical nature of Maharashtra State, it was decided to strengthen polytechnics at regional head quarters to act as lead polytechnics. Staff Development Cells (SDC) were established and key positions of faculty like head SDC, lecturer SDC, lecturer CDC were created in the project. These SDCs are expected to develop expertise and mechanism to organize training programmes for teachers and supporting staff of Govt, Govt aided and non aided polytechnics in the region.

Extension Centre and TTTI Bhopal designed the programmes to train SDC faculty and resource persons at lead

centre polytechnics. Now these SDCs are preparing yearly plan of staff training activities under the guidance of Extension Centre and SPIU for the last three years. Induction programmes phase I & II, Industrial training, content updating programmes are being conducted by these SDCs. Thus a network system has then established for staff training in Maharashtra.

• Enhancing Qualifications :

Recognizing the importance of higher qualification, and SPIU Maharashtra, deputed teachers to TTTI Bhopal for M.Tech.(Ed.) and to Chandigarh for M.Tech. programmes. About 40 teachers have enhanced their qualifications.

Deliberate efforts are being to utilize the expertise of such teachers to improve polytechnic education system by the Director of Technical education in consultation with extension centre faculty. It is believed that investment in human resources would accelerate the process of improving quality of diploma passouts.

• Industry Institute Interaction Cells :

Close interaction with industries is crucial to the development of polytechnic education system. Provision was made in DPR to create post of Training & Placement officer at all polytechnics. Accordingly all posts were created and filled. Advisory committee has been set up to guide various activities to enhance interaction. Similarly Industrial Training of Teachers of 12 weeks duration is organized in planned way. TPOs assist in getting appropriate placement and monitoring industrial training. More than 400 teachers have undergone this

training and it would be a regular feature to provide industrial training to every teacher in five years.

4.0 FUTURE PERSPECTIVE :

Govt. of India established four TTTIs in the country. Some regions felt need of establishing extension centres in the States. Looking to the needs of human resource development in the field of education in general and technical education in particular it would be advisable to formulate policy of establishing extension centres in each state. Such extension centres need to be provided with adequate infrastructural facilities including human resources. In view of the past experience of functioning at extension centre Pune some suggestions are presented below which will enable to formulate future policies.

- States to take initiative to identify resource persons from its own system in consultation with TTTI to work at extension centres.
- Extension centres to provide services at higher levels in policy making and on the job guidance to polytechnics. Faculty at extension centre be provided training in appropriate areas to develop expertise.
- Promote researches in technical education at polytechnics through well designed projects. Research findings should form the basis of changes in policies .
- Assist state directorates to establish mechanisms for long term perspectives plans.
- Develop programme for Potential

Leaders in the Technical education system. Such leaders would be initiators of planned change towards quality education.

- Undertake Training of Trainer Programmes for resource persons in the state polytechnics.

5.0 CONCLUDING REMARKS :

The author has worked in polytechnics for about 18 years and at Extension

Centre Pune for equal number of years. Contributions made by faculty and others have resulted in visible impact on polytechnic education system. The author feels that quality in education is possible only when planned training activities for personnel at different levels are undertaken. Investment in human resources is key factor for resurgence of India.

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