

## A RESOURCE SYSTEM FOR TECHNICIAN EDUCATION IN GUJARAT

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### PREAMBLE :

To meet with the challenges posed by the ever changing technological developments and scientific advancements, the technical education system requires to be vibrant, innovative and ever-ready to adapt itself to new situations. This requires, apart from day to day working of the system, a sub-system, "a resource system," capable of fore-seeing new requirements, devising and implementing new projects to meet with the new requirements and help the system in internalizing the same. This is a continuous and ever lasting process. TTTI and its Gujarat Extension Centre are serving that purpose since 1974.

### 1.0 T.T.T.I. (WESTERN REGION) :

In later part of 60's, India was hit by severe recession in affecting severely the Polytechnic education system. GOI then decided to consolidate and improve the then existing system to cope up with the challenges faced. With these objectives, four regional TTTIs were established. For the Western Region the TTTI was

located at Bhopal.

In the initial period, TTTI concentrated in Teachers' Training through long and short term programmes. For these programmes the centralized system of operation was suitable.

Once the recessionary atmosphere gave way to progress and development, new demands were made on the system. This required diversification of activities necessitating constant interaction between TTTI on one side and the administration and the Teachers on the other side. Centralized system of operation was not wholly capable to meet with the new requirements. An hybrid model was thought of in mid-70's, in which TTTI, Bhopal would play central and pivotal role, extension centres supplementing its activities in the respective states. Till today this model is working effectively.

### 2.0 T.T.T.I. EXTENSION CENTRES

#### 2.1 Why Extension Centres?

The variety of activities undertaken by TTTI like STIP, various innovative

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projects in fields like educational management, curriculum development, media development, students assessment etc. required constant interaction with, and acceptability and commitment to new ideas by the teachers of the state. To call everybody to Bhopal, every now and then, was proving ineffective and uneconomical. As the TTTI faculty was considered as "Outsider" it could not establish full rapport with the teachers on psychological level. Hence, extension centres were established in the states.

### 2.2 Role of Extension Centres :

Some of the roles expected to be played by the EC's are as follows :

- 2.2.1. To work as a link between TTTI and state technical education system
- 2.2.2. To identify appropriate persons to associate them with the various projects and encourage them to work during the conceptualisation and implementation of project.
- 2.2.3. To liaise with the state authorities like secretariat, directorate, TEB and Polytechnic for speeding up the work
- 2.2.4. To work on behalf of TTTI in state and on behalf of state at TTTI
- 2.2.5. To remove impediments arising during design and implementation stages of various projects in state and at TTTI.

In short, EC's are to work as facilitator. For this purpose, it is necessary that the faculty to work at EC should be drawn from the state cadre and should be of open and innovative mind.

### 3.0 GUJARAT EXTENSION CENTRE (GEC) :

#### 3.1. Establishment and Development :

On September the 9th, 1974 TTTI GEC was established in one drawing hall of the Govt. Polytechnic, Ahmedabad. It started with 2 faculty members who were well versed with and trained at TTTI. CD was the main activity during the initial period. Later on faculty members were deputed for a period of 2-3 years, from the state cadre while other staff was on permanent role of TTTI.

Most of the faculty deputed were senior in hierarchy and having vision, know how of innovations and flare for educational technology. It went on changing periodically but quality wise it remained, most of the times, same. TTTI resources were put to maximum utilization. It can be said, without exaggeration that GEC played significant role in making the state pioneer in adopting and implementing various projects like EEC, CSA, MPECS etc. Other states willing and capable, followed suit.

In late 80's, GEC was provided with spacious areas, commensurate with its increased activities, in the premises of the Polytechnic. Now it is being shifted to its new and bigger premises, on Sola road, in the neighbourhood of CDC, LRDC etc. units of the State.

#### 3.2 Development Through Collaboration - Role of GEC :

TTTI and the state technical education system collaborated, GEC working as facilitator, in conceptualizing, designing and implementing various projects for the common goal of improving of the

system in Gujarat.

Some of the prominent projects implemented, many of them for the first time in the country, are mentioned below :

### 3.2.1. Curriculum Development (CD) :

In the 70's, CD was given main thrust so as to meet the changing needs in industry. Now the activity has been internalized and an independent 'CDC' unit has been established and is working independently.

### 3.2.2. Engineering Experimentation Course (EEC) :

Traditional practice of conducting laboratory work was replaced by "student - centred" and "objective oriented" EEC. Now the project has been institutionalized and preparation / revision of laboratory manuals as and when required, is being carried out by CDC.

### 3.2.3. Comprehensive Scheme of Assessment (CSA) :

CSA project was launched in early 80's at 6 polytechnics, on pilot basis to ensure content validity, reliability and comparability into the assessment. Now the TEB has internalized the system.

### 3.2.4. Institutional Evaluation (IE) :

The project was implemented between 1978-88, for the first time in the country. Its aim was to evaluate total performance of the institution based on pre determined criteria, encompassing whole gamut of operation of an institution.

### 3.2.5. Multi-Point Entry and Credit System (MPECS) :

The project is being implemented since 1987, probably for the first time in

the country involving so many institutions and such a large number of students and programmes. The purpose of the project is to give the students opportunity to progress according to their capabilities and to give them more freedom in selecting courses of their choice. Now it has been internalized by the state.

### 3.2.6. Planned Change Programme (PCP) :

It began in 70's and was implemented with the active participation of TTTI in the initial period. Now it has been internalized by the state.

### 3.2.7. Community Polytechnics (CP) :

This project was initiated in early 80's at two polytechnics on pilot basis. Later on gradually more and more polytechnics were involved. It is serving the surrounding community quite well.

### 3.2.8. World Bank Assisted Project (WBAP) :

This project is meant for strengthening technician education system in India. GOI's HRD Ministry distributed the available WB aid to various states based on submitted (and vetted by authorized agencies) project reports. In this field also state of Gujarat was amongst the first lot which started receiving grants. With the help of this grant the directorate, with the active cooperation TTTI and GEC have established -

- (i) CDC - To design, develop and implement curricula, independently;
- (ii) GEC - To offer diploma programmes by Distance Education Mode;
- (iii) LRDC - To design and develop

print and non-print teaching - learning aids.

The centres are headed by the officers who have worked in GEC for reasonable periods in the past.

### 3.3. Role of GEC :

Over and above the roles of TTTI EC's, mentioned above, following activities were also undertaken by the GEC

- (i) Undertaken formative curriculum evaluation to find out the effectiveness of the CD project;
- (ii) Helped in institutionalizing EEC;
- (iii) Conducted Induction Training Programmes for fresh polytechnic teachers;
- (iv) Conducted in-house orientation programmes;
- (v) Conducted short-term programmes with the TTTI faculty and also independently;
- (vi) Co-ordinated calendar programmes;
- (vii) Helped polytechnics in formulating SD programmes, in conducting action-research etc. Also helped DTE, TEB, SPIU, III cells etc. as and when

required.

### 3.4 Conclusion :

Looking back to its 25 years of existence, TTTI GEC can feel satisfied that it has contributed its mite in the development of technical education system in the state of Gujarat. GEC, so far has played very significant role in designing, developing and implementing various projects successfully.

GEC will have still greater role to play in meeting with the challenges posed to Polytechnic education system by ever changing technological and economical scenarios. It may become necessary to change completely existing model of operation to meet the challenges thrown to the system.

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