

### Introduction

Curriculum development on scientific lines was undertaken for the state of Madhya Pradesh (MP) Diploma Courses in Civil, Electrical and Mechanical Engineering during 1970-71. The course structure, content and objectives were derived from an analysis of needs of the industry and functions performed by technicians in the industry (See Figure -6.1). During the first job analysis survey, about 1400 diploma holders were contacted, in addition to their employers. Specialists from field and industry were consulted for topic level validation. The curricula were spelled out in terms of behavioural objectives and also contained content analysis and suggestions for teaching and learning. Orientation programmes, content updating courses and development of instructional resources were undertaken in a big way. In all these steps polytechnic teachers participated actively. Sixty curricula were prepared with intensive teacher participation (about 300). The first comprehensive Curriculum Evaluation research study was undertaken in 1975 in which written responses were obtained from 400 teachers, 100 teachers were observed and interviewed, and 800 students were tested and given questionnaires to complete. (Please see Annexure VI C for more detailed Description.) Data was also obtained from Principals, Employers and Board of Technical Education (BTE).

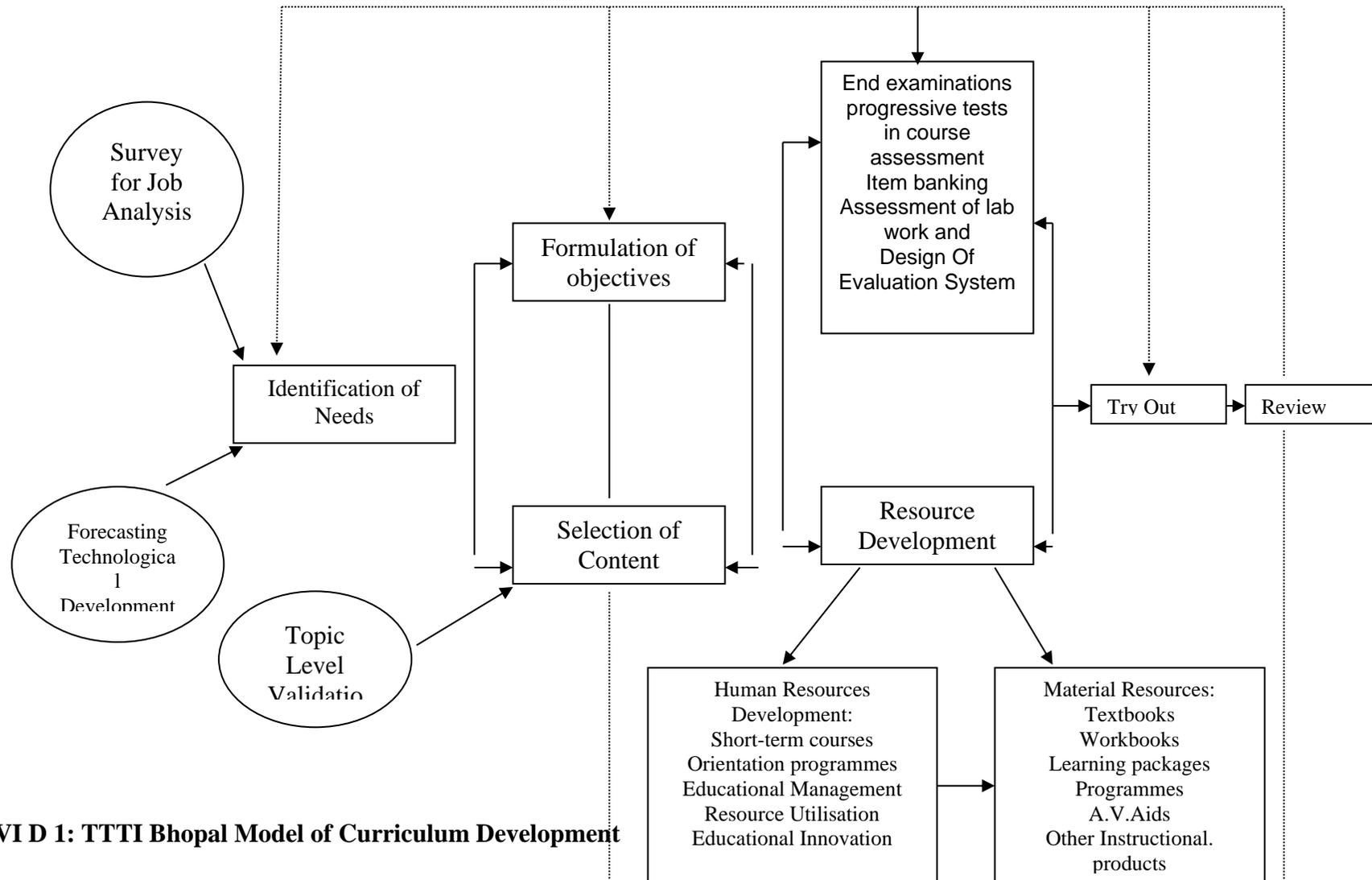
The first curriculum revision exercise was undertaken in 1980-81. This exercise involved 65 subjects with teacher participation of about 350. The second revision of curriculum was undertaken in 1988-89 for 5 subjects, the curricula for the remaining subjects were revised by BTE itself. The state has introduced Multi Point Entry and Credit System (MPECS) during 1989-90.

The job survey for introducing Diploma in Construction Technology in MP polytechnics has been completed during 1989-90, and course outline has been finalized.

The data from the job survey was used to design and develop curricula for the conventional courses in the state of Gujarat during 1973-75. This exercise encompassed the preparation of curricula of 90 subjects with teacher participation of about 450. The Curriculum Evaluation research study was carried out during 1982 and responses were obtained from 288 teachers and 888 students. In the light of the evaluation, the first curriculum revision exercise was undertaken in 1983-84, which involved 100 subjects with teacher participation of 500. The second curriculum revision for Gujarat was done during 1987-88 on the basis of Multi Point Entry and Credit System (MPECS) approach, which is described separately.

The curriculum development work for Diploma courses in Textile Manufacturing and Textile Chemistry and Post Diploma Courses in Production Technology and Refrigeration and Air conditioning for Gujarat was undertaken during 1979-80 with the conduct of job surveys. During this exercise 60 curricula in textile technology, and 10 curricula for post diploma courses were developed.

Curriculum writing in the diversified areas like Automobile Engineering, Plastics Technology, and Architectural Assistantship etc. for Gujarat also began in 1982-83, and involved 120 subjects and 600 teachers. These courses have also been covered under MPECS. It followed with the curriculum development in 25 courses at Diploma and Post Diploma levels for 332 subjects. These involve new and emerging technology areas as well.



**Fig. VI D 1: TTTI Bhopal Model of Curriculum Development**

NITTTR Bhopal

---

The curriculum development based on job survey was also undertaken for Diploma in Food Craft and Hotel Management for Food Craft Institute, Pune, Maharashtra. The curriculum revision for Civil, Mechanical and Electrical Diploma courses in Maharashtra state polytechnics has also been undertaken during 1986-89, and curriculum detailing for 74 subjects, involving 220 teachers has been accomplished.

Curriculum Development, based on job survey was undertaken for Diploma Courses in Fabrication Technology and Food Technology for the state of Goa during 1982-83.

In addition, a number of other curriculum development projects have been undertaken. One of the striking features of this activity is the adoption of curricula developed by the client states with the assistance of NITTTR.

The work of preparing Model Curriculum for Polytechnics for the Government of India was coordinated by NITTTR Bhopal and involved participation of about 100 teachers from all over India.