CHAPTER FOUR

VISION
FOR THE IIT SYSTEM

*"It's not what the vision is,
it's what the vision does......."*

*Peter M Senge
(1947 -)*

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A key question to answer is whether IITs have comprehensively fulfilled their purpose or for that matter whether IITs have achieved their potential in full measure? The answer is an emphatic yes insofar as it relates to the calibre of the UG entrants, the quality of their education and their subsequent achievements. In regard to the other aspects like research output, effectiveness of their work with the industry or their contribution in the service of societal needs, there is no clear quantitative benchmark for the IIT system as a whole and for the individual IITs. Comparison of IITs against international benchmarks, while useful, may not be entirely appropriate because IITs are institutes of national importance created for a specific purpose, and operate in a particular societal context. In the absence of quantitative benchmarks, a qualitative model is suggested to analyse the extent to which IITs have achieved the vision, first articulated by the Sarkar Committee.

4.1   MODEL OF THE IIT VISION

The core elements of the IIT vision, expressed in Nehru's words (page *v*) and the Sarkar Committee and Nayudamma Committee (1961) Reports, are

- The basic function of IITs is production of scientists and engineers of the highest calibre through **education (1).** It should be tightly integrated with **research (2)** and **extension (3).**

- Goals & tasks of the institutes should relate continuously to changes taking place in the **socio-economic development of the country (4)** and … rapidly exploding **universe of knowledge in science & technology (5).**

- IITs should embody the student with values, enthusiasm and ability to engage in research, design and development to help building the nation towards self-reliance in her technological needs

To facilitate *prima facie* analysis, the above statements have been translated into a simple influence diagram comprising the five elements and their relationships (see figure 4.1).

The model suggests that the priority of the IIT system is clearly on education, followed by research and extension. Research and extension have a very specific purpose-they are expected to aid absorption of new developments in science and technology, facilitate appreciation of societal issues and problems in technology management, and help translate these into excellence in education. It also suggests that public funding of IITs should result in students willing to take on problems of national interest. The model has sufficient feedback loops to ensure that the IIT system and individual IITs can adapt to changes in the environment.

However, a comparison of the vision statements of the IITs (Figure 4.2) against the model of the IIT vision shows that the match is not perfect. While educational excellence is reflected in all the
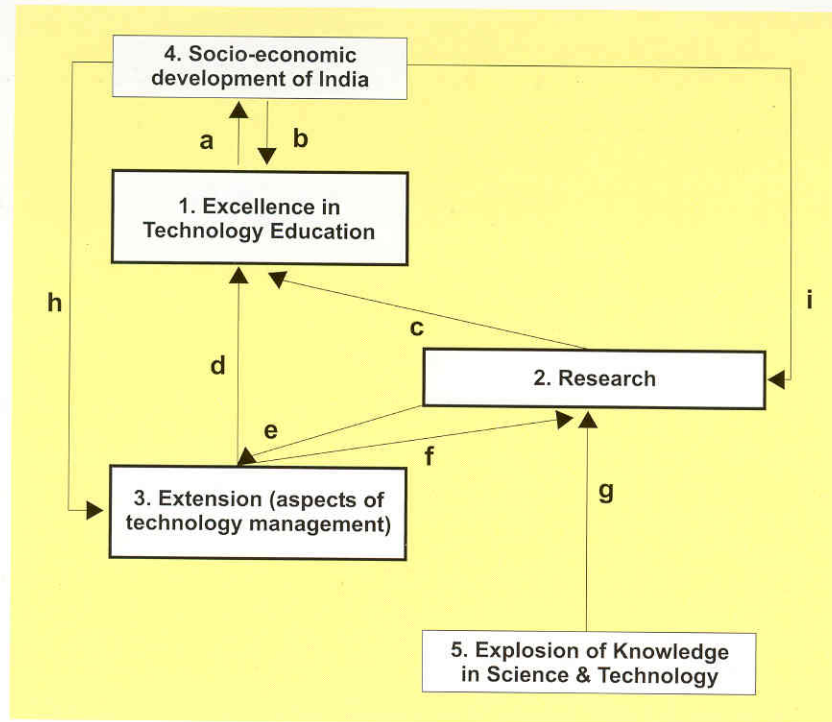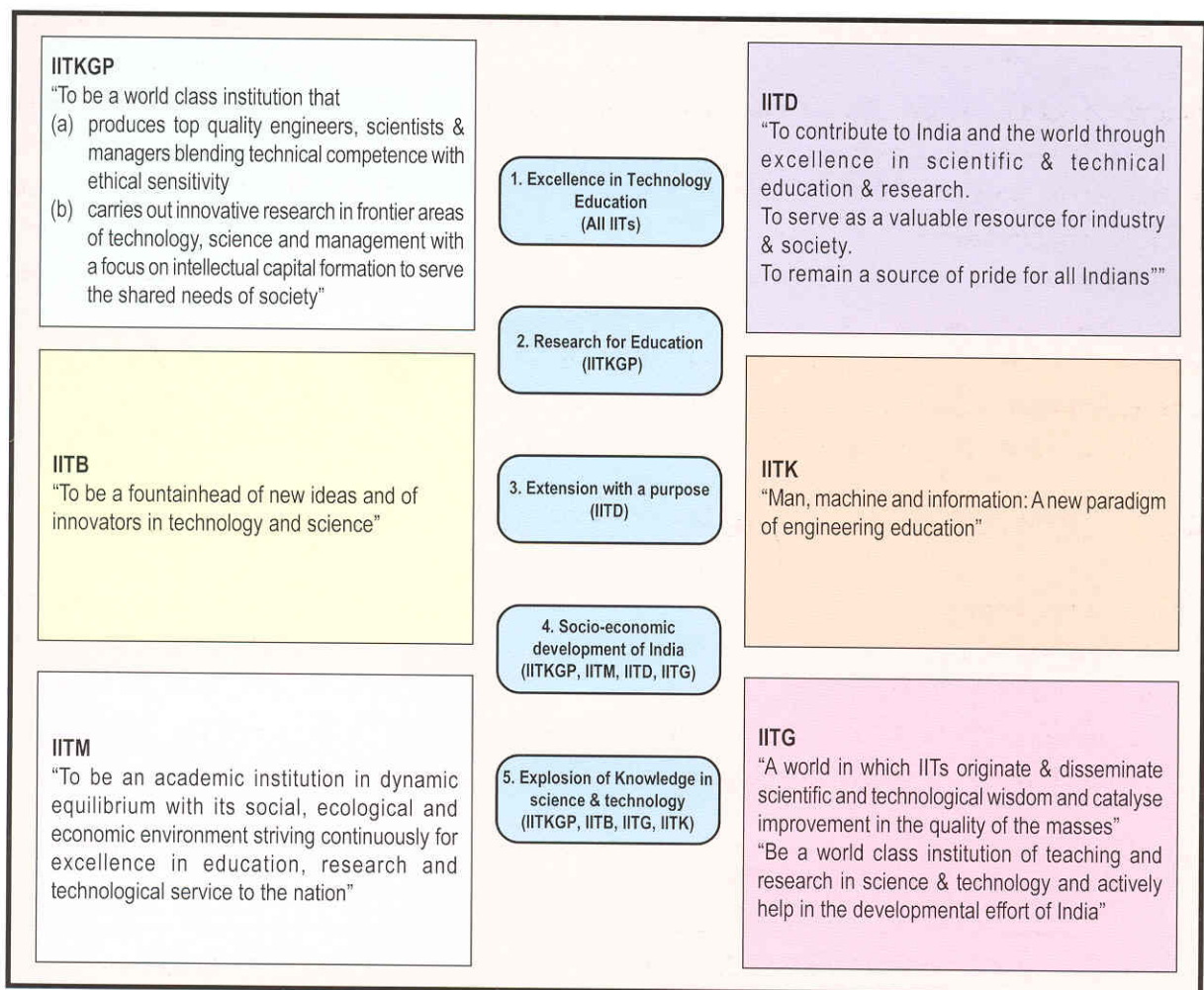
Figure 4.1: Model of the IIT vision

Figure 4.2: Alignment of vision of individual IITs to the overall vision