

**TOTAL QUALITY MANAGEMENT IN  
HIGHER EDUCATION IN INDIA  
-A DIAGNOSTIC STUDY OF SELECT  
ENGINEERING AND MANAGEMENT  
INSTITUTIONS**

*by*

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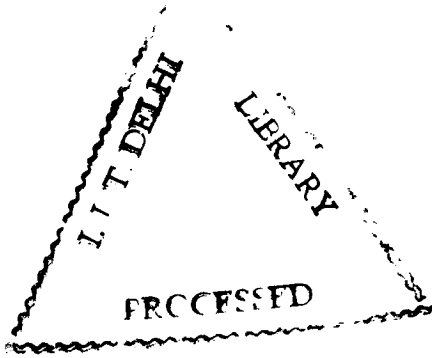
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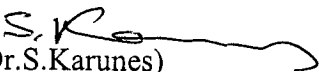


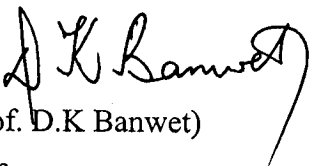
*With the Blessings of*  
**Lord Vishnu**

# CERTIFICATE

The Thesis titled “ *Total Quality Management in Higher Education in India – A Diagnostic Study of Select Engineering and Management Institutions*”, being submitted by *Ms. Sangeeta Sahney* to the Indian Institute of Technology, Delhi, for the award of degree of *Doctor of Philosophy*, is a record of bonafide research carried out by her. She has worked under our guidance and supervision and has fulfilled all the requirements for the submission of thesis, which has attained the standard required for a Ph.D. degree of the Institute. The accompanying thesis is her genuine and original work and the results presented in the thesis have not been submitted elsewhere for the award of any degree or diploma.

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# **ABSTRACT**

The educational sector and higher education in particular, has been pressurized to shift its focus from one of quantitative expansion to one with emphasis on quality. India has one of the oldest and largest systems of higher education in the world. Notwithstanding the quantitative expansion that has taken place over the past decade, there has also been a growing emphasis on qualitative considerations through the few policy reforms that have been introduced. However, the Indian higher education system has been unable to respond to the demands of the stakeholders effectively.

This study looks into the aspects of Total Quality Management in Education. An extensive literature review led to the identification of the gaps in the area, wherein the study has been focussed. The study is an attempt to develop an integrated framework for Total Quality Management in Education. As a result of the extensive literature review, the objective of the study was formulated which was to develop and propose an integrated framework incorporating those total quality elements that would help meet the requirements of the various customer groups.

The study also aimed at the identification of the requirements of the different customers of the education system; identification of the design characteristics reflecting the quality components for education; and, determination of Service Quality through Gap scores. Further, the study also aimed at firstly, relating the design characteristics / quality components and their implementation to the different customer requirements so as to identify the relationship; and secondly, at identifying the underlying correlation among

the different design characteristics, thereby identifying the minimum set of design characteristics able to cover all customer requirements.

The research undertaken, is descriptive, diagnostic and exploratory in nature. The conceptual framework was developed on the basis of an extensive literature review. The scope of the study was confined to educational institutions imparting graduate and post-graduate professional degrees in and around Delhi. Questionnaires were developed to capture quantitative data for the main study. Two software packages – SPSS 9.0 version and LISREL 8.5 Student version were used for the analysis of the data. The statistical analysis was both descriptive and inferential, and included univariate, bivariate and multivariate techniques. Gap Analysis was done to determine the level of Service Quality. For the design of a model that would integrate the customer requirements with the design characteristics and synchronize the interests of the various customer groups, the Quality Function Deployment (QFD) Matrix was used. The important / significant design components so identified through a quasi - QFD were subjected to further analysis qualitatively through Interpretive Structural Modeling (ISM) and quantitatively through the Path Analysis.

The study finally led to an Integrated Framework of Indices / Model for Total Quality Management in Education. On the basis of these indices, a definition of Total Quality Management in Education has been formulated. The requirements of the different customers of the education system have been identified. So have the design characteristics reflecting the quality components for education. The Service Quality has been assessed through Gap scores. The relationship between the various the design characteristics / quality

components and the different customer requirements has been established, and the minimum set of design characteristics able to cover all customer requirements identified. There is a need to identify and apply the relevant concepts of Total Quality Management to each and every aspect of academic life, that is, to the teaching, learning and administrative activities.

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