

ASSESSMENT OF QUALITY AND STANDARDS OF TECHNICAL EDUCATION

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INTRODUCTION:

With the modern world of competition, no country or organisation can afford to produce poor quality products. For producing quality products, the human mind is to be utilised in addition to physical skills. It is proved beyond doubt that the human mind has infinite capabilities. It is the human mind which controls all his actions. In the past, generally, physical strength and skills were utilised to improve the quality of workforce, while thinking, planning, designing and problem solving were considered responsibility of the management. This philosophy worked only in limited situations and could not result in optimising the concept of total quality. For utilising full human capabilities, it is necessary to introduce total quality consciousness at all levels in the organisation. Quality consciousness at various levels can be created by training and inspiring all individuals to contribute their best towards achieving

the goal of total quality output.

In India a great quantitative expansion in the field of higher education has taken place, during the last five decades. The policy makers of the National Policy on Education (1986) were concerned about the mushrooming growth of institutions within a short span without appropriate and adequate infrastructure. Hence necessity was felt for setting authorities to control and accreditation of educational institutions and programmes. The National Board of Accreditation (NBA), under the aegis of the All India Council for Technical Education (AICTE) and National Assessment and Accreditation Council (NAAC) sponsored by the University Grants Commission are two main organisations in our country to take up accreditation of educational institutions and programmes.

The role of All India Council for Technical Education (AICTE) has become stupendous. The Diploma level intake capacity was 6216 in 1951, which

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has gone up to 1,66,384 in 1995. While at the under graduate level, it was 4788 in 1951, and has gone up to 1,10,451 in 1995. In Maharashtra only, as on today there are 129 degree course institutions & above 200 polytechnics. At the post-graduate level also, there are about 150 institutions offering postgraduate programmes in a large number of disciplines. The mushroom growth of these institutions in the last decade has definitely contributed in lowering down the standards of engineering education.

PURPOSE OF ASSESSING QUALITY:

The core concept of quality cannot be introduced without understanding its real and pragmatic parameter. Therefore, it is essential to understand the basic purposes of assessing quality.

- * Globalisation of education calls for an equivalence between the degrees awarded by different institutions.
- * If we can not measure any qualitative aspect of an institution/programme, we can not manage it.
- * What gets measured, should be impartial, unbiased and crystal clear.
- * If we cannot identify success, a proper system of rewarding cannot be established.
- * If we cannot reward the true success, we are probably rewarding failure.
- * If we can demonstrate results, we can gain credibility.

A NEED FOR QUALITY MANAGEMENT :

In the post liberalisation era during this decade, accelerated industrial growth and information explosion has provided the most fundamental challenges to the management of technical institutions in India. The changes are so profound and accelerative that any attempt to respond to them using established principles, models, practices and processes are likely to be out of order. At the same time, there is a critical need to establish a common platform of understanding technical education management, so that the demands of the reforms do not result in slow and delayed response. If the reforms are not rightly brought in, the trust of industries and society in technical graduates and technocrats coming out of these institutions will be lost.

There is an urgent need for technical institutions to develop a sophisticated response to this new changing environment. Designing or adopting structures and models in theories may exhibit efficiency temporarily but which will lose sight of the main purposes of technical institutions. The net effect of pressure from the government, students, parents and industries and other agencies will bring extreme competitiveness in the institutions.

Reducing or stopping grants by the government and funding agencies, increasing non-plan expenses and intensified competition for internal revenue generation, are the problems converted into crises in many

institutions.

There will be inevitably increased specific demands on technical institutions as suppliers of technical manpower and services to the society as a whole. The concern of quality in delivery is further complicating the design of right approach for managing technical institutions. The emergence of new Indian culture of expectations where "user friendly" or "client driven" needs are most important, forces the institutions to have a dynamic interaction with society, industries and other interested parties.

For industries, banks, hospitals, public sector organizations, training institutions, Total Quality Management represents a powerful means of meeting their challenges. Evidence of increasing interest in TQM is seen from the number of companies seeking ISO 9000 accreditation, the number of public and private sector organizations adopting TQM, the increasing programmes of training organizations on Quality, TQM, ISO 9000 and increasing publications of literature available and their availability in the market.

FEATURES OF TQM IN TECHNICAL INSTITUTION :

TQM has three crucial features that distinguishes it from other theories applicable for managing technical institutions.

- * It is holistic - It parameters every aspect of organization and every relationship. It develops integrity and coherence of values that are

lacking in most other models.

- * It is value driven - TQM places fundamental significance on values and purposes. It introduces a system of managerial thinking with sound moral values into management that seems necessary in technical education.
- * It is about managing the interpersonal components of the organizations and equally acknowledges the interdependence between an organization and it's environment.

TQM has to be evolved in response to the needs, context and values of specific technical institutions. There will be significant difference between industries and public sector units, grant-in-aid institution and private institution in the way in which TQM is interpreted and applied. The factors that may affect inculcation of concept of quality in Higher Education are explained with the help of the table on **Page No. 4**.

CRITICAL FACTORS OF QUALITY IN HIGHER EDUCATIONAL INSTITUTIONS :

- * The most essential prerequisite for ensuring a total improvement in quality and enhancement of standards can be enlisted as follows.
 1. Teaching aims and objectives should be clear, worthwhile and appropriate to students' and employers' needs (one key recognisable characteristic of Quality is relevance).
 2. Students and employers should

FACTORS OF QUALITY IN HIGHER EDUCATIONAL INSTITUTIONS

Teaching	Research & Extension	Administration
1. Curriculum	1. Appropriateness	1. Communication flow
2. Attitudes of faculty	2. Planning & Scheduling	2. Files network
3. Potential of faculty	3. Ethical Practices	3. Attitude of staff
4. Teaching methods	4. Interaction with business, industry & community	4. Decentralised responsibilities
5. Teacher-Student relationship	5. Transfer of technology	5. Hierarchy importance
6. Academic environment Capabilities	6. Analytical/computer job and person	6. Matching between
7. Evaluation system	7. Literature availability	7. Quality improvement programme for staff
8. Nexus of curricular/ co-curricular extracurricular activities	8. Research environment	8. Office automation
9. Importance given for total personality development	9. Customer focus	9. Management's attitude

contribute to the judgement of Curriculum design delivery and outcomes.

3. Curriculum policy should encourage new methods of promoting learning.
4. Staff development policy should include a rational basis for appointment, induction, appraisal and development.
5. Institutions should evaluate the attainment of their objectives, and adjust their practice accordingly. Further, it is necessary to grant autonomous status to educational institutions to increase their effectiveness.

STEPS FOR TOTAL QUALITY :

It will not be possible to enlist a comprehensive list of variety of component that can help to introduce concept of quality in technical education. However, a few guidelines are offered here, that can inculcate a team-spirit and quality culture at the institutional level. The real basis for success of any quality improvement programme is to establish a conscious quality culture.

- (1) Develop appropriate institutional goals and communication system considering the organisational structure.
- (2) Develop participation of people in setting and realising institutional

goals effectively and to develop mutual trust as well as appropriate interaction.

- (3) Develop leadership qualities at various levels through staff training programmes.
- (4) Organise training to faculty and other staff through continuing education programmes to develop industry-institute interaction.
- (5) Develop appropriate attitudes of people towards problem- solving, improvement in performance and total quality output.
- (6) Provide suitable work environment in the institution with appropriate interaction of management and strategy.
- (7) Introduce flexibility in the system to incorporate changes necessary for improvements in performance.

CONCLUSION :

TQM is yet relatively untried in technical institutions in India. Research is necessary to understand just how relevant the approach is to technical institutions. However, it does offer a systematic, holistic and value driven approach that has the potential to be

developed. The culture and environment of each technical institute is different. The needs and opportunities are also entirely institute-specific. TQM is very attractive to most of the organisations because it is not culturally specific and can be easily adoptable. Looking at the experiences in other service sectors, it would, seem possible that it might apply to technical institutions. To apply the Total Quality Management approach, technical education must be defined within the context of total system.

In conclusion, it may be stressed that in order to improve the quality of education, all engineering institutions must have a relook at the traditional type of curriculum and academics, as well as, administrative structure. There is also a need to examine the relevance, effectiveness and usefulness of the prevailing system of the engineering education in regard to the present requirement of the industry in particular and society in general. The engineering institutions should accept the challenge to restructure the system wherever necessary and the government agencies should come forward to give the required support and freedom for the purpose.

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