

TOTAL QUALITY MANAGEMENT IN TECHNICAL INSTITUTES*** Dr. B. B. Singh & Dr. S. P. Chaurasia****ABSTRACT**

This article deals with the role of the elements of Total Quality Management (TQM) such as leadership, people involvement and TQM culture in the upgradation of technical institutes; alongwith certain remedial measures to be taken by the leadership to overcome the problems of technical education so as to serve the requirements of customers of engineering graduates. Certain pitfalls have also been pin-pointed for elimination in order to make the concepts of TQM implementable successfully in any technical institute desirous to achieve greater pursuits in the customer-market.

1. Introduction :

Total Quality Management (TQM) strives towards the achievement of quality in everything one does. World over today, the buzzword is Quality, Customer Delight and Information Technology. Quality can be achieved by every individual organization but to maintain it is a difficult process. Hence to achieve Total Quality is also difficult. Total Quality Management (TQM) calls for achieving, maintaining and managing all the quality parameters so that every organization may provide the best quality products and services to its customers. The customer/client may be an external customer/client who pays for the products / services or an internal customer-someone within the organization who receives the output of one's process.

TQM involves everyone in the organization from the Chief Executive (Vice-Chancellor, Director, Principal) to the most humble peon. It encompasses all departments and all functions in the organization. It aims at standardizing and improving all the process in the

organization. In other words, it covers the quality of management of the organization's business in all its aspects.

TQM in Technical education can be expressed as a process designed to focus on the expectations of industrial houses, Government etc. (i.e. clients) and to provide them with a suitable Engineering Graduate who is committed to quality. Facilities for technical education in India are growing very fast. This growth is mainly due to the changes in Government policies and willingness from professional institutes to impart technical education on self - finance (i.e. no-grant) basis. Naturally, this has given rise to deep concern regarding standards of education that is being imparted in these institutes. Since Engineering Graduates passing out from these institutes are required to fulfil the modern and high-standards needed by industries, business houses and so many other sectors from society, hence an institute which has quality consciousness and the continuous quality management as its way of life can only produce "quality engineers" who are able to meet the

***Dr. Babasaheb Ambedkar Technological University
Lonere - 402 103, Raigad (Maharashtra)**

present and future requirements and will be the most suitable engineers.

Though forging institute's consensus on total quality is a long-term vision, but the successful implementation of the vision will transform its organizational structure into a horizontal management committed to client satisfaction. The proof of this success will be the institute's position in tomorrow's market place.

2. Present Efforts for Upgrading :

Presently, the Bodies responsible for technical education have already started assessment of Engineering and Technological Institutes. Government of Maharashtra have given different grades to different institutes, while AICTE has set up a National Board for Accreditation (NBA). Thus, their system of performance appraisal is elaborate. Still, the monitoring agencies want quantifiable indicators to evaluate institutes performance. It is, therefore, attempted here : (i) To analyse 'Technical Education' as system; (ii) To suggest quantifiable indicators to evaluate the performance of the institutes; and (iii) To suggest "Constant Quality Management" efforts to improve institute's performance level.

Governments, AICTE and DTEs are mainly responsible for framing rules regarding minimum requirements of land, physical facilities, staffs, books etc. They appoint inspection committees and verify actuals. They have a right to withdraw the approval given to defaulting institutes. They also fix pay - scales, service rules for staff to be employed in these institutes. Universities to which the institutes are affiliated are mainly responsible for framing rules for the academic part. They decide course-duration, number of the subjects to be taught in a particular semester or year and its method. Different Universities

have different rules. However, more or less, they are the same.

3. Elements Of TQM Responsible For Upgrading Of Technical Education :

TQM means different things to different people. Every organization has its own list of elements or fundamentals of TQM. TQM is thus an umbrella under which the management includes everything that it considers important for its success. For instance, an institute related to technical education, where technology and consequently customer demands are changing rapidly, may add 'innovation' as one of the essential elements of TQM. Most of the elements are common to all TQM programs. Different institutes may accord different priorities to these common elements based on their immediate needs. An institute's priority may also change from time to time according to the prevailing circumstances. However, following elements of TQM play a significant role in the upgradation of technical education in any institute.

3.1 Leadership :

This is one of the most important elements of TQM. The success or failure of any programme depends to a large extent on its leadership. It is the leader (Vice-Chancellor, Director, Principal) of the organization who can decide on the adoption of TQM. It is the leadership that decides the priorities of the organization. The leadership has to demonstrate its commitment to TQM and provide strategic direction to the movement. Providing resources to the institute is another major function of the leadership. It has to provide the lead in bringing about necessary changes in the culture of the institute essential for the success of TQM. An important role of the leadership

is to evolve a proper system of recognition and rewards for those who have contributed towards quality improvement of the technical education. Leadership's commitment to TQM is also seen in the way it interacts with external clients.

The leader should do the departmental task analysis of the institute. He/She should chalk out the mission of the department, its responsibilities and activities. He/She should also identify the client of products (engineering graduates). He/She should also tell his/her requirements to suppliers (parents / schools / colleges). To begin with, the leader must -

- (i) identify client requirements, and prioritize them. The leader may sometimes designate these requirements as specific goals with targets, schedules and so on;
- (ii) the leader should start with the key-requirements of the institute and
- (iii) he/she should identify and list the organizational process including intra- and cross-functional activities that add to the key requirements to meet the targets of the institute.

3.2 Involvement of Employees :

TQM needs the involvement of everyone in the institute right from the Vice-Chancellor, Director or Principal down to the most humble peon in the institute. This will mean training people to fulfil their individual roles in the movement, then empowering them to act accordingly, and finally recognizing good performance to encourage increased involvement.

Employees of the institute should participate in various quality initiatives such as departmental or cross-functional problem solving, suggesting new schemes,

formation/membership of small groups like quality circles etc. The enthusiasm with which employees participate in training programmes and make use of knowledge and skills acquired during the training which is an important indicator of the success of people's involvement. Here customer's (society's) involvement is necessary for better understanding of their expectations and for getting its feed - back on the performance of the institute in meeting its goals. As the quality of the outputs of the organization depends to a large extent on the quality of the inputs it receives from the external suppliers (parents, schools, colleges), it is extremely important to involve the suppliers in the TQM movement of the technical institutes.

3.3 TQM Culture :

TQM involves a new way of management of the affairs of the institute. This new way requires a change in the culture of the institute. For instance, TQM can not succeed in organizations structured into distinct functional areas, which are deeply involved with their functional objectives. In such an organization each function works for its own narrow interests rather than working for the common objectives of the organization as a whole. If the organization structure is highly function oriented, it may have to be changed to a less rigid structure in which there is a lot of interaction and understanding among different functions. This change can only be initiated by the leadership with a view to enhance team spirit and to inculcate the culture of teamwork in the institute.

4.0 Corrective Action Required To Upgrade Technical Education :

There are certain remedial steps required to be taken by the leadership (Governments, AICTE, DTEs and

Universities etc.) to remove the problems of technical institutes in the country to meet the goals of TQM. Few such steps can be specified as follows :

- i) Grading methods of the technical institutes should be improved and be followed strictly.
- ii) Exploitation of the staff should be stopped by implementing AICTE norms in respect of salary and job security in the un-aided institutes.
- iii) Provision of the infrastructure as per AICTE norms.
- iv) Minimum eligibility standards should be fixed for students for admission.
- v) Inter-disciplinary interaction in the institute.
- vi) The criterion of minimum attendance for appearing at semester/annual examinations should be followed strictly.
- vii) To design the curriculum to meet the requirements of the customers.
- viii) Continuous assessment of the performance of the students in the form of tests.
- ix) Arrangements of extra-curricular activities to ensure all round development of the students.
- x) Industry institute interaction.
- xi) Industrial training of the students as part of the curriculum.
- xii) Establishment of technological park.
- xiii) Organizing seminars, conferences and short-term courses for establishing acquaintance with the state-of-the-art technology.
- xiv) Industrial training of teachers related to technical education to upgrade their technical know-how.
- xv) Using Information Technology (IT) as one of the teaching - learning aids.
- xvi) Autonomy to institutes for the creation of new institutional vision.
- xvii) Modernization and removal of obsolescence of laboratories and workshops of technical institutes in order to enhance functional efficiency.
- xviii) More powers should be given to AICTE by Central Government to implement its rules and regulations in technical institutes.
- xix) Find out the clients' requirements and take the corrective measures to meet their requirements as regards the quality of technical education and training being imparted to students.
- xx) Students' contact scheme and students' counselling to know their difficulties in respect of education and training.
- xxi) Performance appraisal and development schemes should be implemented very strictly.
- xxii) Conducting need - based industrial/academic programmes on requisition by the Institutes or Industries.
- xxiii) Social, educational and academic audit of technical institutes.
- xxiv) Overall review of the whole system to control the quality and further improvement methods to be adopted.
- xxv) Staff development through deputing staff for training, paper contests, incentives, etc.
- xvi) Brain storming sessions to discuss the problems of the institute and to

find out an amicable solution.

- xvii) Recognition and rewards to those who are giving their outstanding performance at the academics or in co-curricular/extra-curricular activities.
- xviii) Management of the institute should be commensurate to ISO 9000 standards.

5.0 Pitfalls To Be Eliminated :

Many of the organizations have tried adopting TQM. Some have achieved resounding success and others have failed to make much of headway. They have either stopped TQM altogether or tried to move from one expert to another. So, it might be interesting to know what were the reasons for the failure of those organizations as the knowledge can help one to avoid the pitfalls. In a few cases the apathy or inaction of the middle management may also appear to be the reason.

Let us see the details of some the more common pitfalls that have led to the failure of TQM in many organization.

- (a) Lack of genuine commitment of the leadership towards TQM implementation.
- (b) Overdelegation of the responsibilities by the top management to a quality assurance manager (Dean, Registrar, Heads of the Departments, Convener of the Centers).
- (c) Lack of clear focus of the leadership (Vice - Chancellor, Director, Principal, and Heads of the Departments) on the factors, which are keys to the success of TQM.
- (d) Impatience shown by the leadership regarding the results of TQM in the organization.

- (e) The leadership does not lead the involvement by personal example, (i.e., he/she does not practice it), but implements the TQM concepts through middle managers.
- (f) Failure to set up necessary organization to guide the movement essential for the success of TQM.
- (g) Inadequate and an inappropriate recognition and reward system formed by leadership also leads to the failure of TQM.
- (h) Scepticism shown by the middle management to the ideas while implementing the concepts of TQM.
- (i) Fear of the loss of power by the middle management to those employees who are holding lower posts.
- (j) The training and education programmes are not organized in a cost-effective manner. They are not well structured with a clear link between the goals and objectives of the institute and course contents. Not preparing a well-integrated master plan for education and training and using an ad-hoc approach makes the movement ineffective.

6.0 Conclusion :

If the leadership follows the recommended action plan for the introduction of TQM in technical institutes and avoids the pitfalls just described, there is no reason why the institute should not achieve success. TQM does not involve any great technology, it simply uses the common sense of a good management and makes the institutes more competitive. TQM in any organization is a continuous journey towards excellence. Even if leadership is able to gain a fraction of it, it will bring the technical education to greater heights.

★