

## WHAT IS TQM -

### i. e. TOTAL QUALITY MANAGEMENT

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#### 1. Introduction

Total Quality Management is a style of management associated with Industry or an enterprise. It involves concepts of control, quality, process and customer. The Total Quality Phrase comes from "Total Quality Control" originally coined by Feigenbaum (1983), one of the quality gurus. The words "control" and management smack of centralisation and authoritarianism, which is at the outset unpalatable to an educational environment. But it may be mentioned that Total Quality Control refers not to managerial decision making but to statistical control (Shewert, 1931) and the need to develop processes that are stable and predictable. It is controlled processes and not controlled personnel/management that is associated with Total Quality Management. As such, there is no reason why Total Quality Management should be looked at with aversion by educationists. As a matter of fact, Total Quality Management requires the hierachial structure of a corporate body to be pulled down to a flat structure which is consistent with taste and culture of an educational campus.

#### 2. Three Dimensions of Product :

Quality is associated with a product/service in industry. The characteristics of the quality of a product could be stated as its availability, it works, it is durable, service is good and employees are courteous. The quality of a product has three dimensions - design, process and output.

Design refers to the intended characteristics of a product. It should reflect consumers needs, should include prescribed specifications of the output, time frame for delivery and the supplies material and human resources-needed to develop the output.

Process - the flow of work activities is the most critical dimension of quality. The process should have identified the customer for whom the product is being processed who should also be involved in the design. "Customer First" is the motto of Total Quality Management. Plotting the process flowchart identifies various stages of design, processing and output. If there is a change in product/process, adequate attention is paid to design and output but the process part is almost not taken care of. A process at a particular stage may not be efficient/effective and rework will have to be resorted to; components/product may have to be discarded being faulty/defective, resulting in scrap; processes may include steps that do not add to the value/quality of the product and there-by cause unnecessary complications. A major object of Total Quality Management is to eliminate scrap, rework and unnecessary, avoidable complexity. Output refers to the actual product/service the customer receives. Structure, strength, shape & durability are the aspects of a product that are measurable, whereas a process is something which cannot be measured quantitatively.

Thus, it is seen that, the most

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important aspect of production is the process and hence Total Quality Management aims to make the process controllable and predictable by using statistical control methodologies and initiating the idea of continuous improvement which is a distinctive characteristics of Total Quality Management over other styles of Managements.

### 3. Continuous Process Improvement:

Total Quality Management is not a passive descriptive term; it is an energetic activity - that of continuous process improvement. (C.P.I.) C.P.I. is the most important element of Total Quality Management Philosophy. Hence, it is necessary that we understand the concept of C.P.I. before we discuss TQM. There are four key ingredients for continuous process improvement. These are (i) honesty (ii) Shared vision (iii) Patience (iv) Commitment. The total quality management philosophy can be taught and learnt but not these 4 ingredients; they have to be developed by individuals; they require a different type of personnel with certain attitudes and commitment.

#### i) Honesty :

Solving a problem requires admitting that it exists; and thus, improving a process requires first acknowledging that there is room for improvement. After acknowledging the problem, next step is to determine who has the power to correct it. In most of the cases, it is the management.

#### ii) Shared Vision :

Continuous process improvement requires the participation of every one involved. Support for total quality requires a shared vision that process can be improved and that similar improvements are possible in design, output and cost, as well.

#### iii) Patience :

Enhancing quality of a product or service through continuous process improvement requires study and a good deal of time, energy and money. Hence, great patience is required.

#### iv) Commitment :

Without commitment, frustration is likely to dampen your enthusiasm and efforts, particularly when your patience wanes. It is here that commitment assumes significance. Commitment must come from all, at all levels.

### 4. Theory of Total Quality Management :

Many thinkers have contributed to the philosophy of Total Quality Management, notable amongst them are Quality gurus like Edward Deming (1980), Juran (1988) Crosby (1979) and others. Principles of Total Quality Management are neither new nor unique. What is new is the recognition that we can and must pursue quality consciously, in a systematic manner. The theory of *Total Quality Management is built on six foundation*, which are described below:-

#### 4.1 Mission And Customer Focus :

Understanding and improving quality requires knowing what we do, why we do, for whom we do. A mission statement of an organisation should mention the purpose of the organisation, the customers whom it intends to serve and how it would like to serve them.

Knowing our mission and customers, it is possible to measure performance against stated purposes. Such measurements provide feedback and allows the organisation to improve quality of design, process and output.

#### 4.2 Vision ;

If mission spells out what an

organisation does and for whom it does it, vision tells us where the organisation is going. A vision statement tells us what the organisation will be like when its mission and goals are attained. The vision declares what the organisation wants to become. Without a vision, an organisation or any unit thereof, interested in the pursuit of quality, is likely to spin its wheels without advancing or improving.

#### 4.3 Continuous Process

##### Improvement (C.P.I.) :

Processes – the flow of activities – are the means by which we carry out our mission. We pay attention to inputs (students admitted with higher & higher % of marks at the qualifying examinations); Design (design of curricula to meet the changing needs of industry) and output (number of graduates passing out of the institution) but pay little attention to the improvement of the educational process (teaching-learning process, industry institution interaction personality development etc.) TQM philosophy lays stress on improvement of these processes on a continuous unending basis, which involves elimination of scrap, rework & unnecessary non-value adding processes.

##### 4.4 Scientific Approach :

Edward Deming conveys the significance of data and analysis, when he says "In God we trust, all others must use data". TQM has its roots in statistical Quality Control (SQC). Organisations now use statistics increasingly to model processes and determine ways of improving both processes and output. In TQM, one has to use scientific methods which Shewhart has described as plan-do-check-act (PDCA) cycle.

**Plan :** Identify the process in need of improvement, analyze the problems and make a proposal for changes in the

process for improvement.

**Do :** Try this change and note the results.

**Cheque :** Check whether the proposed change has taken place and if so, to what extent.

**Act :** If the desired change is satisfactory, implement the change or else try an alternative.

Flow charts, cause and effect diagrams, pareto charts, check lists, histograms, scatter diagrams and run and control charts are some of the tools frequently used in TQM. Data collection and statistical analysis help us to identify where variation exists and the causes for the same. There are two causes of variations - special causes & common causes. These can and should be eliminated. Common causes are inherent in the process, occur regularly and have wider affects. These cause rework, scrap and un-necessary emplexites. These have to be identified and variations from common causes need to be reduced through careful, data based, permanent changes in the processes.

A process without special causes is said to be "in control", that is, it is stable and predicable. Once a process is in control, quality improved can be achieved by reducing the variations for further

##### 4.5 "TOTAL" in TQM :

This "Total" implies involvement and participation of all the people in the organisation. As N.J. Irani, Managing Director of TISCO, Jamshedpur, said "Total Quality is akin to total war. As in war, every person within the nation and from each sphere of activity is involved, directly or indirectly, so also in an organisation wedded to quality. Every division and employee is involved in quality improvement efforts."

This involvement & participation can be meaningful only if necessary empowerment is there. Hence, necessary

empowerment has to be provided to each individual.

#### 4.6 System Approach :

Wherever changes are to be brought in, systems approach has to be adopted. If change is piecemeal, it results in confusion. Hence, a systems approach is a must.

Thus the TQM structure is based on six foundations of (i) Mission & Focus on Customs. (ii) Vision (iii) Continuous Improvement Process (iv) Scientific approach (v) total Involvement & Participation & (vi) Systems approach.

#### 5.0 Thus TQM is :

TQM is a philosophy of Continuous Improvement which can provide any institute with a set of practical tools for meeting and exceeding the present and future needs, wants & expectations of the customer.

It is not an imposition, it cannot be done for you. The urge for TQM must come from within the Institution.

It is not inspection. It is about always trying to do things right first time & every time, rather than occasionally checking if they have gone wrong. TQM is not to work someone else's agenda unless the agenda is specified by your customer & clients. It is not something which only senior managers do and pass on to the lower ranks. The "Total" in TQM indicates / dictales that everything & everybody in the organisation is involved in continuous improvement process.

TQM involves two slightly different aspects i) CPI & ii) tools & equipment used to put quality improvement into action.

TQM is both a mind set and a set of practical activities - an attitude of mind as well as a method of promoting C. P. I.

TQM is a practical but strategic approach to running on organisation which focuses on the needs of the

customers and clients. It rejects any outcome other than excellence. It is not a set of slogans. It is a deliberate, conscious planned approach to achieve desired levels of quality in a consistant fashion which meets & exceeds the needs & wants of the clients & customers. It is a philosophy of never ending C. P. I. only achievable by & through the people to satisfy & exceed the needs & wants of the customer & exceed them in a consistant fashion.

It is a broad based philosophy with an action plan accompanied by tools & techniques for implementation of quality measures for any type of organisation which wants to grow & prosper and acquire a competitive edge, so much essential in the global market today. It is applicable to all types of organisation, be it a manufacturing one or service one or even an educational institute / a hospital / a charity / trust working for the cause of social upliftment. Only it needs to be adapted and adopted to suit the objects, working style, work culture and environment of a particular organisation.

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