CHAPTER -1

INTRODUCTION TO TOTAL QUALITY MANAGEMENT

1.1 INTRODUCTION

Total Quality Management is a participative management philosophy for planning, organising, understanding and managing an organisation in a way to enable meeting customers (internal as well as external) needs and expectations effectively and efficiently without compromising ethical values. It is said to be total when it becomes an absolute priority of the organisation, out weighing other elements of management (Francois et al, 2003). It may lead to disappearance of the need of inspection, because quality builds in the design itself (Sarvan, 1997). It is most popular and durable modern management concept (Gallear and Ghobadian, 2000), which has much to offer firms that wish to improve (Kaynak, 2003). It helps in achieving the primary goal of enhancing productivity with reduced cost.

Total Quality Management aims at long-term continuous improvement in customer satisfaction and excellence by embedding self-control in each unit of the work system. Its practice improves overall organisational efficiency through remarkable reduction in rework time and process variance (Kumar et al, 2002). It is an enhancement to the traditional way of doing business (Dale et al, 1999) and a people focussed management system aiming at quality in everything, everytime and at the all levels (Sornam, 2003). TQM consists of three words where 'Total' signifies made up of the whole; 'Quality' shows the degree of excellence a product or service provides and 'Management' is the act, or manner of handling, controlling, directing etc (Dale et al, 1999). TQM creates a completely win-win relationship in all areas. In an organisation, TQM can be a significant investment, which requires substantial involvement and time from senior management. It starts with the customer requirements and ends with their degree of satisfaction. It is a way of thinking about goals, organisation processes and people to ensure that the right things done right first time, where the resultant process can change attitudes, behaviour and hence results for quality.
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The goal of TQM is to satisfy the needs of customers; prevent poor quality rather than correcting it; developing an attitude of continuous improvement; understanding the value of measuring performance to identify opportunities and maintain improvements and eliminate chronic sources of inefficiencies and costs. It is a focussed management philosophy, providing leadership, training and motivation in order to continuously improve the operation of the organisation.

TQM has a dual make up, a 'hard side' and a 'soft side' (Gallear and Ghobadion, 2000). The 'hard side' focuses on systems, tools, techniques and enlisting standards of performance. The 'soft side' is concerned with attitudes and values reflecting the emphasis given to mobilising all employees around the goal of continuous improvement and enlisting their active commitment by means of participation and responsibility. In an organisation, TQM represents the idea of open organisational systems comprising both the technical and social dimensions (Yeung et al, 2003). It is an established field of study where academics, consultants, engineers and quality practitioners have contributed their ideas towards advancement (Eng and Yusof, 2003). It is a new way of managing and is based on exceeding the customer expectations, empowering employees and continuously improving product, services and organisational processes that produce them (Stoner and Werner, 1995). It helps organisations to plan their efforts (Frangou, 2002).

1.1.1 TQM Philosophy:

TQM represents a philosophy rather than a set of management techniques (Lord and Lawrence, 2000) that involves everyone in an organisation in a continual effort to improve quality and achieve customer satisfaction (Bhatt, 2002). TQM is an organisation wide integrative philosophy aimed to improve every part of the organisation on a continual basis by eliminating wastage and using teamwork as the main vehicle of process, which helps to gain competitive advantage. It can be applied to any type of organisation, manufacturing or service, small or large, public or private. TQM philosophy supports a building block approach to improvement projects and does not resemble the clean slate approach. TQM is both a philosophy and an attitude. As a philosophy it is designed to make an organisation to conform
to 4 Fs (friendly, flexible, faster and focussed). As an attitude it helps an organisation to confirm to continuous improvement, involvement of entire workforce in an organisation wide effort for customer satisfaction, increase in market share, increase in productivity and lower the cost of rework, scrap and warranty. ‘Improvement after improvement’ is the basic thrust of TQM philosophy. It has spread to many areas, which may include health, education, non-profit organisations, public and private organisations. It is the result of influence of the many quality gurus i.e. Deming, Juran, Crosby, Feigenbaum, Ishikawa and Imai. It provides an overall concept that fosters continuous improvement in an organisation, which can be achieved through internal and external quality improvement and signifies ‘improvement after improvement’ (Sundararaju, 1997).

The development of TQM from inspection to a management philosophy is the result of participation of every member of the organisation in enhancing company performance through customisation of services to meet customer’s expectations with a comprehensive set of processes. Deming, in 1982, in his book ‘Out of Crisis’ advocated that quest for quality should not stop with targets because targets are manipulated and a target confers an upper ceiling on quality (Patricia, 1995). The core philosophy of TQM is that products or services will become better and cheaper if user demands are continually analysed and development and production processes are improved accordingly. It is a guiding light to attain superior product and process design, world-class manufacturing, SPC, JIT production and improved customer relations. The top management can play a guiding role by adopting and institutionalising the philosophies of TQM; which is a long journey and can be practiced in all activities, by all personnel, in manufacturing, marketing, R & D, sales, purchasing, HR, etc.

TQM philosophy is customer oriented where all members of the organisation are required to systematically manage the improvement through the ongoing participation of all employees in problem solving efforts across functional and hierarchical boundaries. It incorporates the concepts of product quality, process control, and quality assurance and quality improvement. Consequently, it is the control of all transformation processes of an organisation to better satisfy customer’s needs in the most economical way.
aspects in the Export and Import Policy (1992–97) followed by a worldwide acceptance of ISO Certification. It was also realised that the country should have a national scheme for quality and conformity assessment in line with those prevailing in advanced countries. It was realised that, at the national level, the objective of quality management can be obtained by creating quality awareness, encouraging third party quality certification; establishing testing and calibration facilities; and training of manpower in quality activities.

In 1992, the then Prime Minister of India launched the national quality campaign that projected a national quality awareness drive in all states and union territories through a mechanism of direct training and use of media. The required inputs were contributed in form of theories, tools and ideologies by JUSE (Japanese Union of Scientists and Engineers), and consultants of USA, UK, Germany and Austria. The other sources were MNCs investing in India and Annual Mission to overseas-developed countries. The national level quality campaigns helped a lot to spread basic quality awareness into various segments of society but barriers related to work culture, top management commitment and constancy of purpose and persistence posed strong and deflecting situations.

In 1980s, quality control and quality circles were developed in BHEL and Bharat Electronics; Confederation of India Industries (CII) consolidated the movement of Indian industries to bring about a synergy of resources. In 1987, CII formed a separate TQM division by shifting its focus from quality circle to quality management (Bhatt, 2002). The TQM division with the help of 21 companies agreed to support the cause by pooling its revenues and pledging to start a TQM journey in year 1987 itself. Thereafter in 1989, CII (Confederation of Indian Industries) organised training courses for ISO 9000. In 1991, first company got certified by ISO 9000 and after that certification journey has reached to new heights with various types of organisations including health care, information technology, manufacturing, engineering, services, educational institutions etc getting certified. To spread the quality consciousness, CII, with the help of its countrywide network and with the EXIM Bank of India has instituted Award for Excellence for Indian companies with the co-operation of EFQM. With this the CII has developed the expertise
to provide training and consultancy to companies going in for self-assessment in the quest for business excellence.

In 1992, CII organised the launch of National Quality Campaign and since then the organisation of ‘quality summit’ in November has become the annual feature across the country and of celebration of November as ‘Quality Month’ around the world. In India during November, a variety of programmes are being organised to spread quality culture across all sectors of the organisation with the employees, management and their family participation.

In most companies this celebration is organised with employees making presentation on the sectional quality objectives, quality achievements, quality concerns and plan of action and quality improvement targets. They also participate in essay writing and slogan competition. Children are encouraged to show their enthusiasm and interest and participate in large number in painting, essay and slogan competitions on quality. Housewives can be encouraged to write on the topic like ‘hygiene at home’ or ‘slogan competition’. However topics can differ with quality planning, quality thinking, quality life and quality communication and quality meeting. Prizes, certificates and ‘quality shield’ are bestowed on deserving sections and participants.

Of late, Indian companies have realised that quality can produce impact on competitiveness both in the local and the global context. To meet the growing competition, the Government of India is playing facilitative role by showing its commitment by instituting and recognising different quality awards at different levels, which in long way has changed the companies’ mindset. Some Indian companies that have initiated TQM practices are Sundaram Brakes Linings Ltd, Brakes India Ltd., Lucas TVS Ltd. and India Pistons Ltd. etc. Sundaram Clayton Ltd., a company of Sundaram Group of companies became the first Indian Company and the fourth non-Japanese company to receive the prestigious Deming prize in the 50 years history of Deming Award. Other TQM implementation initiatives in India can be summarised as follows.

Eucardito Rite Electronics Pvt. Ltd. at Lucknow was the first Instrumentation Company to be certified with ISO 9001. Indo-Gulf Fertiliser Ltd. was the first fertiliser unit to initiate TQM. It aims at complete customer satisfaction by involving all the people in the organisation along with vendors, sales network and others in its total quality process. Its various efforts towards
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Quality Council of India is an autonomous body composed of a chairperson and about 10 members from governmental departments and about 20 members from industrial and trade organisations, academic institutions, consumer association, certification bodies, quality award winning companies etc. The Prime Minister of India nominates the chairman. The council is responsible for effective management of the whole scheme and operates through a secretariat and various committees.

Figure 1.1: Quality Council of India

1.2.3 Criticism of TQM:

In the recent years, the viability of TQM has become controversial and is being challenged inspite of earlier success. There are few reasons which force organisations to embarrass one or another model of work procedure than TQM. These criticisms are as follows:

i) There appears to be a lack of clarity as to what constitutes TQM and what its measurable goals are.

Source: Lal, 1994 p.21
ii) Since TQM is based on delighting customers, but today’s business needs to be responsible towards society, community and environment, where they operate.

iii) The never-ending improvement process has forced companies into a quality culture where they are often uncertain of their status regarding quality achievement (Khan, 1999).

iv) It demands appropriate fit between new techniques and organisational design, structures and process. Therefore firms cannot expect favourable results just by their implementation (Kumar et al, 2002).

v) It requires continuous assessment to achieve a sustained improvement in quality (Kumar et al, 2002).

vi) TQM is in someway idealistic vision or working towards goals and is impossible to exactly define when one has reached them (Shah, 1998).

vii) TQM implementation requires unrealistic employee commitment levels and the profitability is not automatic and is effected by many direct and indirect costs.

viii) Even after a successful implementation, it takes a couple of years to begin financial improvement.

ix) TQM practices have negative implications for workers where they are subject to highly visible forms of manpower, control and process of constant surveillance and monitoring of output and performance (Kumar et al, 2002).

1.3 DEFINITIONS OF TQM:

There is no single unambiguous definition of TQM; however it is possible to identify the essential elements and normative prescriptions, which constitute this ubiquitous movement (Lord and Lawrence, 2000).

Taguchi (1960) defined quality as ‘conformance to a specified target value’ and quality improvement as ‘reduction of variation around the target value’. He further defined quality as, ‘the loss a product causes to society after being shipped’.
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Juran (1974) defined quality as 'fitness for use'.

Pirsig (1974) suggested that 'quality is neither a physical attribute nor a mental concept, but something embodying both... even quality cannot be defined, you know what it is?'

Crosby (1979) defined, ‘Quality is conformance to requirements or specification’.

Feigenbaum (1983) coined the term TQC and offered the definition of quality as the total composite product and service characteristics through which the product or service in use will meet the expectation of the customer.

Garvin (1984) divides the definition of quality into five categories, namely, transcendent, product based, user based, manufacturing based and value based. Further, he identified a framework of eight attributes for the use of defining quality, which are performance, feature, reliability, conformance, durability, serviceability aesthetics and perceived quality.

Shingo (1986) suggested three aspects of quality control: Zero quality control is an idea and to achieve this, two techniques of Poka-Yoke (Mistake-Proofing) and source inspection.

Gibson (1987) defined quality culture as 'the way people think.'

Crosby (1988) defined quality as the result of a carefully constructed culture, which is to be the fabric of the organisation.

In 1988, the U.S. department of defence described TQM as a series of continuous improvement activities involving everyone in the organisation – managers and workers – in a totally integrated effort toward improving performance at every level.

British Quality Association (1989) defined TQM as a corporate business management philosophy, which recognises that customer’s needs and business goals are inseparable. It is appropriate within both industry and commerce. It ensures maximum effectiveness and efficiency within a business. It secures commercial leadership by putting in place processes and systems which will promote excellence, prevent errors and ensure that every aspect of business is aligned to customer needs and the advancement of business goals without duplication or waste of efforts.

Garvin (1992) states, “Quality is unusually slippery concept, easy to visualise and yet exasperatingly difficult to define.”
Ciampa (1992) defined quality as 'function of expectation'.

Crosby (1992) stated, 'Quality means getting everyone to do what they agreed to do and to do what they have agreed to do and to do it right for the first time is the skeletal structure of an organisation, finance is the nourishment and relationships are the soul'.

ISO 8402: 1994 defined TQM as management approach of an organisation centred on quality, based on the participation of all its members and aiming at long term success through customer satisfaction and benefit to all members of the organisation and to society (Juran et al, 1999).

Wakhlu (1994) differentiates between small ‘q’ and big ‘Q’. The small ‘q’ is mostly product oriented, which concentrates on the production starting from design to customer satisfaction. This is considered as TQM. He uses two acronyms – PAMS & OLP. PAMS is principles, Actions, Measures and Strokes. Strokes are schemes, which promote the desired actions and thereby contribute to the achievement of objectives. However, OLP (Outstanding Leadership Process) is considered as an essential factor. He also suggested 6 Cs of TQM, which are commitment, comprehension, competence, communications’ correlation and continuity.

Gupta (1994) described TQM as a process of doing business, which is not something that you do in addition to your business as usual but ‘it is what you do’. It is about changing the way people see things.

Bryan D Prescoff (1995) defined quality as satisfying the needs and expectations of customers.

Kanji and Ashar (1995) defined TQM, where ‘Quality’ is to satisfy customer requirements continuously. ‘Total Quality’ is to achieve quality at low cost and ‘TQM’ is to obtain total quality by involving everyone’s daily commitment.

Golomski (1995) defined TQM as both a philosophy and a set of guiding principles that represent the foundation of a continuously growing organisation. It is the application of quantitative and human resources to improve the material and services supplied to an organisation: all processes within the organisation and the degree to which the needs of the customer are met, now and in the future (Filho et al, 1997).
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Juran (1995) defined TQM as ‘the system of activities directed at achieving delighted customers, empowered employees, higher revenues and lower costs (Khan, 2001).

Kehoe (1996) described quality as, “Meeting the customer’s expectations”.

Vinzant and Vinzant (1996) described TQM as a total organisational approach for meeting customer’s needs and expectations that involved all managers and employees in using quantitative methods to improve continuously the organisational processes, products and services.

Kekale (1996) described TQM approach as an integral effort for gaining competitive advantage and general well being by continuously improving every facet of the organisational culture.

Sarvan (1997) described TQM as a management philosophy used by organisations that seek to improve product and service quality and increase customer satisfaction by restructuring traditional management practices.

Thomas (1997) felt that the term TQM was designed to embrace ‘quality control’ and ‘quality assurance’ and encourage a focus upon activities that deliver value to external customers. The control and heritage has often resulted in a continuing preoccupation with internal product quality and the maintenance of ‘quality standard’ independently of the external customer. He defined quality as ‘a set of shared attitudes, goals and values, a sort of spirit that flows through the organisation and holds us together’.

Gatchalian (1997) described TQM as philosophy, which emphasises continuous improvement as a process that places a premium on achievement of customer satisfaction. This requires the participation of everyone in the company in the development of shared mission, vision and plans and in the quest for continuous improvement.

According to Shah (1998), TQM means applying the TQM principles, concepts and practices and could be defined as a holistic systems’ way of thinking in an organisation, this demands quality improvement from a holistic point of view.

Mitra (1998) defined quality of a product or service as, ‘the fitness of that product or service for meeting or exceeding its intended use as required by the customer’.
Arora (1998) defined TQM as an organisational approach to delight customers by meeting their expectations on a continuous basis through everyone's involvement with the organisation, working on continuous improvement in all products/services/processes along with proper problem solving methodology.

Cambridge and Tucker (1998) in a survey defined TQM as a management philosophy that stresses customer focus through enhanced communications, cross-functional team for problem solving, continuous improvement of department processes and worker empowerment for management decisions.

Cole and Mogab (1999) described TQM as the efforts of managers to design systems and direct employees to pursue the enhancement of customer value in all its forms.

Mittal (1999) described TQM as the integration of all functions and processes within an organisation in order to achieve continuous improvement of the quality of goods and services.

Kawamoto (1998) described TQM as a management method in which each individual shares a common target integrating the capabilities of every employee to accomplish the assignment, without a big variance between plan and result.

Nemeth (1999) defined TQM as set of principles (philosophy) and a set of tools and techniques (methodology) that can be used for achieving the main objective of total customer satisfaction.

Gaither and Frazier (1999) stated that the objective of TQM programmes is to build on organisation that produces products and services that are considered first in class by its customers.

Dalela and Saurabh (1999) stated that, ”TQM means quality in every aspect of company operations”. It aims at zero defects and customer's satisfaction alongwith enhanced profitability.

Konalkar and Dhar (1999) described TQM as an approach that fosters quality leadership, quality production and full utilisation of organisational resources, which can transform an organisation's culture.
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Improvement and maintenance cycles while changing the organisational culture.

Bhatt (2002) defined TQM as a total, company wide effort through full involvement of the entire workforce and a focus on continuous improvement that companies use to achieve customer satisfaction. It is both a comprehensive managerial philosophy and a collection of tools and approaches for its implementation.

Does et al (2002) defined quality as the degree to which the totality of characteristics of a product, process or service confirms to the requirements resulting for their utility of purpose.

Zheng and Dolken (2002) described TQM as a continuous, self-regulating process in which the interests of all the parties involved with the company are balanced.

Aravazhi and Chockalingam (2002) defined TQM as continuously meeting agreed customer’s requirements at the lowest cost by releasing the potential of all employees and the development of a total organisational way of life, which puts quality first in order to satisfy customer’s needs and expectations.

Beer (2003) defined TQM as continuous improvement of work processes to enhance the organisation’s ability to deliver high quality products or services in a cost effective manner that involves a number of interventions.

Eng and Yusof (2003) defined TQM as both a philosophy and a set of guiding principles that represents the foundation of a continuous organisation. It integrates fundamental management techniques, existing improvement efforts and technical tools in a disciplined approach.

Kaynak (2003) defined TQM as a holistic management philosophy that strives for continuous improvement in all functions of an organisation and can be achieved only if the total concept is utilised from the acquisition of resources to customer service after the sale.

Sornam (2003) described TQM as the planning, organising and controlling of organisational systems to achieve continuous improvement.

The Oxford English Dictionary says, “Quality is the degree of excellence that a thing possesses”.

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John Reskin, the 19th Century Painter and Art Critic made a valuable and additional point.... “Quality is never an accident; it is always a result of intelligent effort...."

Statistical Institute, Hyderabad in its training document has defined TQM as an integrated organisational approach in delighting customers (both internal and external) by meeting their expectations on a continuous basis through everyone’s involvement with the organisation working on a continuous improvement in all products, services and processes along with problem solving methodology.

Confederation of Indian Industry (CII) in its document, "Total Quality Management – An Introduction", has defined TQM as "meeting the requirements of internal and external customers consistently by continuous improvement in the quality of work of all employees"

Parag Diwan defined TQM as, "An all encompassing dynamic process in an organisation to promote never – ending investment in the effectiveness and efficiency of all elements of a business."

EFQM defined TQM as, "All manners in which an organisation meets the needs and expectations of customers, personnel, financial stakeholders and society in general".

1.4 PRINCIPLES OF TOTAL QUALITY MANAGEMENT IMPLEMENTATION

In order to lead and manage an organisation successfully, it is necessary to direct and control it in a systematic and transparent manner where success can result from implementing and maintaining a management system that is designed to continually improve performance while addressing the needs of all interested parties. The principles of TQM are prevention of defects, to identify and to act immediately on situations that may give rise to problems (Selvakumar and Natarajan, 2000). However TQM principles work in theory, but are more difficult to practise (Sammalisto, 2001). Although TQM originated in 1950s but principles developed by Deming as a means of delivering error free war ammunitions and equipments to allied forces during
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deficiencies and that is why customer complains (Juran et al 1999). The
customer focus is a strategic concept which is directed towards customer
retention, market share gain, growth and demands constant and satisfactory
orientation to changing and emerging customer and market requirements and
the factors that drive customer satisfaction and retention (Dale et al, 1999). In
practice it means active contacts with customers and maintaining
relationships, where solutions may not be obvious at first glance (Sammalisto,
2001). It ought to be included in the mission, vision and policy of the
organisation to seek commitment of employees towards customers. Here
commitment entails not only examining current customer needs and
expectation but also anticipating their future requirements and expectations.

Customer focus and customer satisfaction are not two things, they
substitute each other. The information on customer satisfaction provides a
focus and direction for continuous improvement throughout the entire firm that
can be measured by comparing product quality and service quality with those
in other firms in the same industrial sector. The customer satisfaction can be
measured quantitatively and qualitatively (Mohanty and Lakhe, 2002). The
minimum requirements that all measuring instruments should include are:

1) Identify the customer(s);
2) Identify those impacted;
3) Identify who you want to focus on;
4) Identify what to measure; and
5) Determine how you are going to measure it.

Total customer satisfaction is a strategic foundation to achieve
competitive advance, that is a sum of every relationship that a firm has with
each of its customers. It is also a measure of quantity in an organisation,
which is evident from Malcolm Baldrige National Quality Award criteria, where,
customer satisfaction accounts for 30% weightage. It has visible and invisible
benefits. The visible benefits include (Mohanty and Lakhe, 2002).

1) Improvement in the firms’ reputation and image.
2) Reduction of customer turnover and continuous repeat orders;
3) Increased attention towards customer needs;
4) Reduction of marketing costs and lower transaction costs;
5) Increased satisfaction among personnel; and
6) Greater stability of the workforce.

In recent years, the customer focus of business has increased substantially with a shift of focus from 'management knows best' to 'customer knows best' (Mohanty and Lakhe, 2002). Here 'customer focus' includes acquiring customer information analyzing customer feedback, working with customers in product design etc. (Yeung et al, 2003). Customer focus is also a competitive weapon for sustaining long-term profitability and survival (Mohanty and Lakhe, 2002). It demands awareness of developments in technology and of competition offerings and rapid and flexible response to customer and market requirements (Dale et al, 1999). It may involve unwavering focus on the internal customers i.e. employees, because employees are the asset and form an important part of the firm’s process (Eng & Yusof, 2003).

In an organisation customer focus can be ascertained through the followings:

i) Customer Complaint Information

Complaints are valuable in finding the customer’s requirements and firm should accept these as appointments to improve the quality of products and services for the ultimate objective of total customer satisfaction. The handling of complaint should be prompt enough because a delay will bring a negative corporate image and the customer will share this negative image with other existing or potential customers. The firms can identify the vital few complaints that demand in-depth study to discover their basic causes and to find out the remedy to these causes with sincerity. The complaints can help reduce problems by including customer requirements into new product / service designs, prior to their production.

ii) Market Investigation

Market investigation helps to find the strength and weakness of products and competitions, which leads to valuable suggestions for the improvement of the quality of firms’ products and services. It further helps to identify the requirements and expectations to meet for demand forecasting of product. It also helps to anticipate the needs of existing loyal customers, potential customers, dissatisfied customers and competitors.
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iii) Customer Satisfaction Survey

The main aim of customer satisfaction survey is to move the customer from satisfaction to delighting them. It helps to find the level of satisfaction with firm’s products and services in a particular segment or in different segments, which can be used, for improving the quality of products, services and processes.

The survey can be used with certain indicators i.e. telephone response time, waiting time at reception desk, report turnaround time, past sale customer satisfaction, buying preferences and comparing these results with previous one.

Other methods of customer focus can be ascertained through:

i) By focusing on the attitude of companies from trading mentality to the customer service mentality (Singh and Bhandarkar, 2002).

ii) By supplying products of the right quality at the right time, at the right place.

iii) By communicating the actual feedback received from the customer. Feedback should be continuous because its stoppage denotes cover-ups.

iv) By anticipating need and initiating positive best practices without any embarrassment.

v) By permeating all organisational activities and attitude towards customer satisfaction.

vi) By emphasising on customer loyalty and long term retention because it costs five times as much to replace a customer as it does to take action for retaining a customer.

vii) By looking towards 100% customer satisfaction and an error free performance (Pheng and Tao, 2004).

In a TQM organisation, TQM practices have a stronger effect on customer satisfaction than they do on plant performance (Kaynak, 2003). Companies delight their customer’s because customers are the reason for their being in business. It gives not only an impact on satisfaction but also gives a benefit of satisfaction when a customer becomes a best sales person.
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The organisation needs to balance the internal and external customer satisfaction and loyalty because loyal customers are the ways to improve the probability for a sustained growth. It can be attained when everyone has to co-operate and communicate with each other by understanding the customer (Nemeth, 1999).

Achieving customer satisfaction entails satisfying the customer’s total requirements. This will form the strategic foundation to achieve competitive advantage. Total customer satisfaction is the sum of every relationship that firm has with each of its customers. It must be the corner stone of quality strategy, which is based on continuous principle. It relates not only to present day sales, but also to performance over a period of time. Total customer satisfaction thus implies managing the business in a manner that would satisfy customers.

Many research studies and Baldrige Award Criteria agree that total quality management cannot exist without a strong customer focus. The Baldrige Award criteria assigns more weight to customer focus and satisfaction than any other quality practice and it is common for businesses to offer a 100% customer satisfaction guarantee these days. Even the main point of Deming’s Chain Reaction focuses on customer satisfaction and loyalty which is based on the firm’s ability to produce consistently high quality products that fills the current needs and desires of customers (Barker and Cagwin, 2000).

In Indian context, when it was the characteristic of closed economy and government protection prevailed, there was less motivation to focus on customer’s expectations. Because, people used to work with departmental orientation and were indifferent towards both internal and external customers (Singh and Bhandarkar, 2002). But with the increase in competition and weakening of trade barriers, customer’s expectations increased and customers became demanding which organisations had to satisfy.

In medium enterprises, the customer focus is essential because they have few customers. For successful TQM implementation, the customer focus in these enterprises can be ensured by understanding the present and future requirements, designing cost effective products and services with the help of market investigation, survey and complaint based information. The customer’s
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Focus can also be ensured by training employees to use zero defect processes, developing effective measures, creating incentives linked to quality goals, encouraging management to lead by example and developing feedback mechanism to ensure continuous improvement.

1.4.2 Top Management Commitment

The importance of the role of top management commitment in TQM implementation is indispensable and particularly at the start of implementation it is essential. It is possibly the most important principle which appears everywhere in the organisation. It requires providing an inspiring vision and making strategic directions that can understand by all. In TQM implementation, the commitment has to start at the ‘top’ with the involvement in setting business strategies based on using product quality as a weapon to capture the global market share and rewarding employees for achieving excellence in product quality (Bhatt, 2002). The commitment provides flexibility and focuses and comes in all shapes and sizes (Robbins, 2003b). It can be assured by learning TQM (even from their employees, if need be) and from their organisation’s successful and unsuccessful experiences, as well as modern management methods from benchmarked organisations. This learning attitude can lead to an enhanced decision making ability of managers. The commitment also can be assured by strongly encouraging employee participation in quality improvement activities by way of suggestion acceptance, taking employee action responsibilities and by being open in listening to voices of employees. The training can also help in establishing commitment. Here managers are taught with introduction of TQM, tools, techniques, roles and responsibilities to act as champions. Training facilitates to ensure alignment of TQM with organisational goals; helps removing roadblocks and placing resources for effective implementation of TQM in the organisation.

According to Tammy (2003) the other ways which management can assure commitment includes:

a) Installing a corporate culture of integrity, customer satisfaction, environmental awareness and continual improvement;
b) Educating via providing members with a copy of TQM practices and delivering presentations on TQM.

c) Creating a quality vision by focusing on improving employee understanding of the quality system and its impact on customer satisfaction; better defining and documenting processes for identifying customer requirements and defining measures to assess how well customer satisfaction can be met.

d) Developing an implementation plan by planning for the scope of work; resources / budget required for implementation and whether the work could be done within the established time frame.

For an effective top management commitment, certain leadership traits i.e. passion, populism and disciplined responsibility are essential (Feigenbaum and Feigenbaum, 2003). The passion in leadership recognises the pursuit of excellence as the most powerful emotional motivator. The leader's passion towards excellence helps change the business performance in respect of customers, markets and profitability. The passionate leader does not delay in taking action and do not waste time simply making speeches. The populism factor is demonstrated by a deep confidence of people throughout the company to bring about improvement when employees are provided with the organisation, flexibility and appropriate support to make improvements. The populist leaders encourage people to develop their own forms of teamwork and their personal ownership of competitive improvement. Disciplined leadership provides the basis for constantly accelerating value for customers, investors, employees, environment and the public. It emphasises on the development of the totality of company's resources with the support from the management, attitude for sustaining sound business growth and continuously creating the management innovations that help drive and escalate that growth.

In a TQM organisation, top management commitment is essential because:
things can be improved with the continuation of TQM implementation.

xiii) They should trust employees and believe that they can do better as well as encourage employees to list the firms' shortcomings and report their own working problems.

xiv) They should have self knowledge, because if they do not know about themselves and what drives them to do what they does, they may have the likelihood of misinterpreting and misusing the data by which their capabilities may get compromised. The lack of self-knowledge is the most common source of leadership failures (Bennis, 2004).

xv) They must always be certain that they are assuring the full spectrum of data and opinion (Bennis, 2004).

xvi) Since they are the most influential people with their behaviour, personality, commitment, perseverance and customer focus, they should bear the responsibility for influencing the organisation with the values, goals, vision and culture that are key to the success and survival of the organisation.

xvii) They should sincerely embrace TQM principles with strength and commitment and understand the actions that are required to be successful.

xviii) They should be committed towards establishing a firm with quality as a primary goal with spreading quality consciousness through the organisation.

In medium enterprises, the top management commitment is a prerequisite for developing, implementing and delegating strategies and action plans. They must proclaim the company's vision and ensure the excitement and motivation of staff for achieving it. Their visible conviction and demonstration in the form of co-operation, praise, encouragement, team development and creation of condition for excellence can go a long way in creating the commitment toward TQM.

However, the management in medium enterprises are busy and are often preoccupied by their day-to-day activities. They find it hard to spare
themselves for appraisal, improvement and planning for activities. But to excel and position in a global market place, they need to be committed towards TQM practices.

1.4.3 EMPLOYEE INVOLVEMENT

Employee involvement means giving employees or their team the ownership of a particular quality goal. People at all levels are the essence of an organisation as they are the driving forces for improvement and their full involvement enables their abilities to be used for the organisation's benefit. The purpose of employee's involvement is to motivate employees in quality related activities using a variety of management techniques (e.g. teams, task force approaches, suggestions, quality control circle, collaborative decision making etc.), where everyone in the organisation works towards the goal of customer satisfaction (Isakson and Spencer, 2000). Total quality management involves full commitment and should be supported by CEO to produce quality from personnel at all levels in an organisation. Since people are most important asset in an organisation, they must see a need for TQM and how it can help them. People covers everyone involved in an organisation's operations beginning with managers who oversee the TQM process to workers at all levels of the organisation.

Employee's involvement is crucial in achieving and sustaining a high level of quality (Bhatt, 2002). It is a process for empowering members of an organisation to make decisions and to solve problems appropriate to their level in the organisation. It can be achieved by making an employee part of the organisation (Eng and Yusof, 2003). It is an approach for improving quality and productivity which is a mean to better meet the organisation’s goals for quality and productivity at all levels of the organisation (Dale et al, 1999). It needs to facilitate TQM implementation because TQM needs both the commitment and creative ideas of employees.

In a TQM organisation focusing on employees is crucial because employees in the process of producing and delivering of quality outputs create good working conditions. They are to be provided with proper training, tools, information and empowerment required for quality excellence, so that their involvement can be truly utilised. The empowerment is felt necessary for...
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improvement in communication within the firm and between workgroups. The members of Quality Control Circle, during the discussion process reviewed data and recommend solutions to workplace problems and then act as a team to implement the necessary changes. Generally this circle uses data chanting, sampling and fishbone diagram to reach solutions. It results into increased employee commitment and motivation with enhanced understanding of the difficulties faced by the organisation. For an effective QCC, the organisational environment should be supportive in terms of financial availability and implementation. The QCC results into tangible as well as intangible benefits. The tangible gains are better quality, productivity improvement, higher safety, greater cost effectiveness, better housekeeping, increased profitability, waste reduction, reduced absenteeism and reduced grievances. The intangible gains are enriched quality of work life, attitudinal changes, harmony, mutual trust, effective team working, better human relations, participative culture, HRD, promotion of job knowledge and greater sense of belongingness.

c) Within Functional Teams

This type of team is related to quality, productivity, safety and so on. It has a short life, aimed to solve problems related to same department. The members of the team are selected according to their potential contribution and meets during the working time.

d) Employee Suggestions

Employee suggestion is based on the premise that employees should be encouraged to suggest measures and ideas for improvement since they are working for long and are familiar with their work and can easily identity their working problems. The management should facilitate timely evaluation and implementation of suggestions. The suggestions should not be perceived negatively by the supervisors, which can quickly kill the interest and enthusiasm of employees.

The implementation of suggestion scheme can be accomplished through employee participation. It is advantageous with its characteristics of easiness, cost effectiveness and ongoing participatory in nature, where everyone shares the benefits with the originator of ideas. Toyota uses employee suggestion scheme effectively to bring about quality improvement.
e) Improvement of Employee Commitment

In an organisation, commitment is an incremental process and can be established only on the basis of confidence among employees and management where top management and supervisors should encourage and motivate employees to develop and utilise their full potential by trusting and caring them. Commitment can generate when every employee is encouraged to function as a supervisor.

f) Job Rotation

The periodical movement of individuals between different set of tasks provide variety in their activities, with increase in skill flexibility and reduced job monotony. It helps employees to learn more work skills, know more processes and understand more about the importance of their current job and by this they become more diversified and multiskilled in performing their current job better.

Implementing employee involvement systems will require commitment from top management as well as from all employees. Because if employees are not in the development of the system they will not live according to procedures as defined in the system (Wiele and Brown, 1997). The commitment may often involve a change in attitudes. It will also involve the management for change in the organisation where guiding the change process requires an understanding of the present organisational culture, attitude, structure and system. However, as a criticism extensive involvement of employees with upper, middle and lower level managers complicates the decision making (Cole and Mogab, 1999).

1.4.4 PROCESS APPROACH

Process approach is based on the belief that if any process is well developed, designed, controlled and managed with right inputs; its output is bound to be good. It requires description of objectives, specifying the need, resources, detailing the instructions, precautions, and process operations, laying down operating conditions, spelling out the responsibilities, authority
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and interrelationships. It also requires specifying the methods of measuring performance, monitoring performance, using feedback for correction, anticipating and preventing problems and improving the process continually. Process approach is a potential technique for developing an effective QMS and helps remove interdepartmental barriers through cross-functional behaviours. Effectiveness, efficiency, flexibility, improvability and excellence can assess the performance of process.

The process approach refers to the application of system of process within an organisation coupled with identifications and interaction of these processes and their management (Ralli et al, 2003). It entails quality improvement such as designing process that are foolproof to provide stable production schedules and work distribution to reduce process variation by building quality into product during the production stage. It may constitute of business and production activities where inputs may be material, money, information, data etc and outputs may be information data, products, services etc. These outputs can also serve as input to another process.

Process can be defined as a set of activities and inputs involved in the transformation of organisational practices for a desired output for meeting customer needs and expectations. Here activities include action, methods and operation. In an organisation, process can be referred as a series of activities needed to create products or services (Mohanty and Lakhe, 2002) and may be considered as an activity using resources and management thereof to enable the transformation of input into output. This concept emphasises on quality improvement, cycle time reduction and prevention through out the company, including the product development and business processes (Easton and Jarrell, 1997 a). It may aim to improve the manufacturing and business processes to confirm with operational standards and customer requirements. Here business processes exist to provide products and services to customers with a set of chains of value adding activities and of movement of items and information and generally consists of people (staff, contractors, society); method; assets (plan, equipment’s, machinery, vehicle etc); information and data; materials; product, energy and even waste (Dalling, 2000).
A process must be documented and controlled in terms of its boundaries, inputs, outputs and activities. There must be meaningful measurements in place and the performance of the process must be continuously monitored and evaluated (Reid, 1992). Since every process has a set of activities, it needs to be managed and performed according to the flow charts. An efficient process must do its job at the lowest cost of resources possible which must consistently meet the requirements of the customer by doing what it suppose to do and to be acceptable it must be able to respond quickly to changing requirements (Reid, 1992). A desired result is achieved more efficiently when activities and related resources are managed as a process. Michael (2003) defined process as a transformation, which transforms its inputs into outputs. It is a picture showing how the transformation is carried out and it shows the inputs and outputs, the activities in between, and for each of the activities, the inputs and outputs used and produced. Colin Partington (2003) defined a process as an activity, which takes resources and converts them to an output. It can be depicted in the following figure. He further highlighted that in the inter-linked processes the output from one becomes the input for the next and so on.

Fig 1.2: A simplified Process

![Diagram](image)

The process-oriented companies see TQM as a tool for the company development. Their goal is to change the thinking among the staff towards internal development of the organisation with staff participation along the lines with TQM. For organisation to function effectively, they have to identify and
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basis. The second tool is benchmarking which seeks out best practices and products from within the firm or among competitors so that processes and products can be improved by learning from the experts. The third is the collection and use of quality data which includes both financial and non financial information that is shared with all employees and provides the necessary feedback, to achieve continuous improvement in quality throughout the firm (Barker and Cagwin, 2000).

The idea of continual improvement was developed in Japan in 1950s and refers to both incremental (i.e. small and gradual) and breakthrough (i.e. large and rapid) improvements, where improvements may take any one of the several forms (Bhatt, 2002):

i) Enhancing value to the customer through new and improved products and services;

ii) Reducing errors, defects, waste and related costs;

iii) Improving productivity and effectiveness in the use of all resources; and

iv) Improving responsiveness and cycle time performance.

In a business excellence model, continuous improvement focuses on enablers i.e. leadership, process, resources, organisation architecture, and people process which helps better business results i.e. productivity, cost, time to market, delivering, responsiveness, profit maximisation, customer and employee satisfaction. It requires a disciplined continuous improvement based on trust, with everyone in the organisation striving to improve the system (Eng and Yusof, 2003). Continuous quality improvement is a commitment in an organisation, a system of process, which is commonly examined in an organisation in search of better methods and based on flexibility to make the changes where one’s or others innovations play an important role. It can be defined as a commitment to continuously examining technical and administrative process in search of better results (Ojha, 2000). It has a significant impact on the development of strategy as well as its implementation (Chapman and Hyland, 2000). It is the road of prosperity and people must develop improvement consciousness and identify the opportunities for improvement on a permanent and continuous basis. It should
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commence with identifying to improve ways of doing things and start when an objective has been achieved, where every system, programme or project should have precision for an improvement cycle. Improvement must be made to keep pace and stay in business. Here improvements can be defined as results, which can only be claimed after beneficial change in an organisational performance.

The continuous improvement can be typified in three ways i.e. gradual, incremental and breakthroughs. The gradual improvement is a continuous never-ending change process; incremental improvement can be described as continual improvement. Here, both, gradual and incremental can be described as Kaizen practices where as breakthroughs can be described as a giant leap, which tend to arise out of chance discoveries.

In an organisation, the continuous improvement practices help to change the attitude where the defence of status quo and resistance to innovation cannot be treated as normal management behaviour. Instead it leads to congratulating people on their identifying problems instead of fear of reprisals for reporting problems. However, in many cases, the behaviour puts hindrances in the way of continuous improvement because it takes more time to change. In this case the required effort may need to be doubled.

In medium enterprises, the continuous quality improvement practices are required to be adopted by all. The involvement of top management at various levels is necessary as its most of the activities are directed towards controlling rather than improvement. Here control is related to either preventing change or creating change or improvement is related to maintaining performance with improvement or breakthrough. Improvement is also necessary because if business stands still, it will lose its competitive edge. The idea of improvement in these organisations can come from the people, who are directly or indirectly involved. In these organisations, the improvement should be taken as a teamwork philosophy, where every member from top to bottom, should not be exempted from the responsibility of improvement. In medium enterprises, particularly, the top management should lead because if they do not demonstrate by doing what they say, they cannot expect others to comply with. The reward practices can also play an important role as it encourages people who have initiated improvement, no matter how
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small it may be. It should be according to prevalent culture and style of organisation.

As an innovative strategy, continuous quality improvement should be imbedded into organisational practices so that future growth and goals may be ensured. For better innovation of these practices, an organisation wide direct active quality involvement, stimulation and management towards innovation is required. It can be managed by four phases i.e. strategy development, ideation, evaluation and implementation. In organisational practices innovation is required wherever new possibilities and options are desired. It can be used to achieve quantum gains, dramatically increase market share of a standard product and development of creation of new approaches to solving seemingly intractable problems.

Action Plan for Achieving Continuous Quality Improvement in Medium Enterprises:

The following steps may help continuous improvement in medium enterprises:

i) Top management should realise that continuous improvement is the only way out for survival and growth.

ii) The priority area for improvement is to be identified and a training programme is to be conducted to develop them and to improve their quality consciousness among employees.

iii) Training programme is to be conducted for all employees so that they can develop quality consciousness and interpersonal and managerial skills according to their need of position.

iv) In line with the quality policy of medium enterprises, the quality objective should be decided.

v) The people engaged in quality improvement should be assigned with special authority and responsibility to fulfill their individual and organisational quality objectives.

vi) The employees and all stakeholders should be trained about the importance of continuous quality improvement in motivation and communication for a supportive work environment.
vii) All people involved should be provided with required materials and resources.

viii) The various marketing processes are to be implemented for better sales turnover.

ix) The quality process is to be assessed according to set processes.

x) The corrective and preventive measures should be taken for effective implementation of TQM.

xi) The continuous improvement is to be implemented through various quality circles and other term oriented initiatives.

xii) Periodic management reviews is to be initiated for better-expected results.

A nine-step action plan has been developed to achieve a continuous quality improvement in medium enterprises. It is presumed that if medium enterprises will stick to these steps in their day-to-day functions in spirit, then they will reach to qualitative world-class performance standards, which may take the entire economy to an unprecedented height. Investigating and practicing an attitude of continuous quality improvement can solve the problems faced by medium enterprises by all the personnel. These improvements can be gradual, incremental or breakthroughs. Its personnel can pursue these practices through persuasion, motivation, direction and involvement. The continuous improvement in an organisation can reduce errors, defects, waste and costs related to them. In a business excellence model, the improvement practices focus on enablers i.e. leadership, processes, resources and organisation structure for overall better results. The benefits associated with continuous improvement are the change of attitude of people from defensive attitude to congratulating them on finding a problem to solve. For an effective improvement, people in an organisation are required to develop an improvement attitude to identify the opportunities for improvement on a permanent and continuous basis.
questions like, “what do I need to know?” and “How will I act on the information?” can enhance success of the efforts.

1.4.8 MUTUALLY BENEFICIAL SUPPLIER RELATIONSHIPS

Supplier partnership can be defined as a mutual ongoing relationship between a buying firm and a supplying firm, involving a commitment over an extended time period and entailing a sharing of information as well as a sharing of risks and rewards of the relationship. It involves integration of key suppliers into the companies’ key processes of production, improvement, technology and strategic planning and especially new product development (Easton and Jarrell, 1997 a). Since an organisation and its suppliers are interdependent, a mutually beneficial relationship enhances the ability of both to create value (Zharen and Chernish, 2002). Because, an effective supplier management leads to inventory reduction, less failure rate, efforts towards waste reduction and elimination of safety stocks, which simultaneously creates leaner operation with increased reliability. A mutually beneficial supplier relationship is facilitated by long term co-operative relationships with a few suppliers as possible to obtain quality materials and / or services because maintaining a small number of suppliers improves product quality and productivity of buyers by encouraging enhanced supplier commitment to product design and quality (Kaynak, 2003). It is important because if a company does not manage their suppliers properly, the chances of getting a high reject rate will be higher and can result in monetary loss (Eng and Yusof, 2003).

The supplier selection should be based on whether they are able to supply products and services that meet all fitness for use requirements. To ascertain the information related to their reputation, total cost, investigation of its manufacturing facility and other relevant information plays an important role. Their participation is related to quality improvement activities along with training and projects. In a mutual beneficial relationship, the purchaser provides training facility to supplier in order to improve quality of products, services, processes and employees. Even the purchaser actively assists in implementing quality management systems i.e. ISO 9000 and ISO 14000 to
its suppliers who are interdependent because mutually beneficial relationship enhances the ability of both to create value.

Having a good relationship with suppliers, understanding their problems and always striving for mutual improvement will benefit both organisations. Relationship with suppliers results in an alliance which is very important and is based on trust, shared vision and commonality of purpose, it creates a win-win situation on both sides and the resultant effect is felt in reduction in cost, reduction in cycle time, reduction in inventory holding and finally improvement in quality which goes beyond just meeting specification and delivery schedules. So, the organisations must now consider not just their direct relationship with their own customers but also the reputation and satisfaction of their suppliers, their corporate governance profile and how they act as a corporate citizen (Stothert, 2003).

In Deming’s 14 principles the importance of establishing long term supplier relationships by limiting the number of suppliers was emphasised, where, selecting and monitoring suppliers based on quality criteria is linked to improved financial and operational performance (Barker and Cagwin, 2000). Supplier relationship is critical to achieving a successful TQM programme which helps to build reliable sources of high quality raw materials with reduced costs related to inspection of in-coming materials for smooth running of production with reduced down time from defective or back ordered items.

TQM principle works in theory, but is more difficult in practice (Sammalisto, 2001). It is like utopia or heaven to many in management, which everyone wants it, but no one wants to do what is, takes to get there (Isakson and Spencer, 2000).

At the end, it can be said that none of the principles are less significant; instead, they are interdependent and complementary. For a full benefit of TQM implementation, organisations should select and implement all with full commitment. Because, on one hand, employee involvement, participation and empowerment forms the corner stone of TQM, supplier management forms the back bone; continuous improvement acts as pillars, process and systems approach of organisational management practices acts as facilitating role for quality improvement by striving quality in all things based on customer perception; while top management acts as organisation man motivating
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management and employees to facilitate quality related training, institute teamwork and employee involvement to lay the foundation for other TQM principles which can result into total customer satisfaction which is the ultimate objective of TQM.

1.5 CHARACTERISTICS OF TQM
The TQM shows the following characteristics:

i) It emphasises on adding values to processes, their management and improvement qualitatively via widespread systematic organisation focus.

ii) It emphasises on cross-functional management, supplier quality, service, involvement and recognising itself as a critical competitive strategy.

iii) It is not independent because much of its power results from integration of multiple principles and approaches.

iv) It is a concept organised by the company management and borne by the staff with the aim to guarantee the company’s competitiveness by increasing its market success and decrease its costs.

v) It aspires to raise the flexibility of the company and motivation of staff where management decision are better guaranteed, processes continuously improved and customers and staff commits themselves to the company in the long run.

vi) It helps organisations to achieve improvements, which often gets delayed due to the lack of attention to cultural implications and systems.

vii) It is based on mutually compatible basic assumptions, which forms an ideal quality culture.

viii) It will be beneficial because everything will be done correctly right from the start.

The characteristics can also be shown in the form of a diamond where TQM is surrounded by other four elements i.e. totality, documents, foundation and improvements.
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1.5.1 TOTALITY:
Totality requires that all personnel should take on some responsibility in the process of quality improvement. This involves a perception of measuring the level of acceptance of TQM among the staff where management's ideas and ideals are shared by other personnel regarding quality as an important aspect of their work culture. Quality involves everyone, where all activities of the company are concerned with managing the entire system including all areas, functions, activities and employees who are striving for optimum quality all the time. Here the quality target is 100% and not 99.9%.

1.5.2 DOCUMENTATION
In implementing TQM, the development of procedures and documentation is most important and vital for control and improvement because documentation helps drive out complexity and helps to accomplish the objective. Simplicity can be obtained by having one idea addressed per paragraph. It should be concise, where it may require 'writing what is needed'. According to Mohanty and Lakhe (2003), "All documentation should be legible, clear, and readily identifiable and carry out authorisation status. It should be approved by the authorised personnel; released and made available in the areas where the information is needed; understand and acceptable to users; reviewed for any necessary revision and removed when obsolete". In summary, it can be said that document should be accurate, timely and generated by the appropriate authority.

Documentation can be prepared by a workshop supervised by top management and attended by the people who are stakeholders. The process and procedures in documentation should reflect as far as possible the existing working practices and identifies the interfaces with the functions internal and/or external customers and suppliers. Here the processes are what needs to be done, which need to do it and what is the result or evidence that it has been done, whereas the procedures will define how an activity is required to be done. In the process of preparation of documentation, Information Technology resources can be helpful in minimising and optimising the
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Participation and consensus of concerned and it should take into account the enterprise's background and culture, technology and market trends as well as management's long term goals. It is laid down by the top management and focuses attention on customer satisfaction. A written policy serves as a reference to remove vagueness and ambiguity and covers some or all aspects of customer satisfaction. Formulation and implementation of TQM policy and programmes requires an establishment of harmony and congruence among the various business policies with a focus on TQM for achieving significant results (Sundararaju, 1997).

According to a final report (1999) of a Research on “SMEs, Technology and Development” of European Parliament, a quality policy should achieve the following:

1. Ensure sufficient operation, administrative and decision making autonomy for the management by identifying through a series of seminars for the different heads of offices.
2. Review and simplify administrative procedures to make them more flexible by directly involving the concerned offices.
3. Encourage a project management approach to make objectives, management criteria, administrative procedures and decision-making procedures clear and explicit.
5. Evaluate the need for institutionally strengthening of the offices and support the development of a culture.
6. Promote internal harmony among staff members in the office and support the development of a culture.
7. Prevent frequent turnover of the office's staff.
8. Promote the visibility of the administrative office as an independent actor with respect to its direct contacts.
9. Establish criteria for control of management offices that are transparent, public and unambiguous and based on standards accepted by both parties.
10. Incorporate progressiveness in the development of various tools to faster continuous improvement.
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A typical quality policy/manual should include (Riddle, 1997): a) firm's history and present market position, b) types of clients served and types of services provided; c) corporate structure (including who has approved the quality manual); d) corporate mission statement; goals and objectives; e) schematic representation of the relationship between the quality manual and other documentation; f) definition of any special terms and g) table of contents.

1.5.3 QUALITY IMPROVEMENTS

An improvement refers to the ability to bring about an order of magnified improvements in all quality activities of the company. Quality means everything or anything that can be improved. Quality improvement is not just an institutional assignment. It is a daily personal priority obligation (Ghosh et al, 1997). It refers to all efforts to increase effectiveness and efficiency in meeting accepted customer expectations. It is a continuous process to achieve a better understanding of the market; to innovate products and processes; to manage and distribute material and products and to provide service to the customers. It should be directed to all areas that influence company's performance. It should not be a one-time affair but must be a call for continuous improvement and participation by every individual right from the top official to the grass root employees (Selvakumar and Natarajan, 2000).

The process of quality improvement is a continuous cycle that requires a structural approach or methodology (Kohoe, 1996). The 'improvement' in "quality improvement" means the organised creation of beneficial change, the attainment of unprecedented level of performance (Juran et al 1999). Quality improvement is a synonym of breakthrough. It calls for a need to identify the customer; understand the requirements of customers through an effective mechanism and translate those requirements into real products possessing desirable characteristics (Tiwary, 2000). However, the best way to push up the speed of improvement is to publicly recognise the early success (Arora, 1998).

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4. Quality improvement should be built into the system and should not be left solely to voluntary initiatives (Juran et al, 1999).

1.6.2 FORMULATING A QUALITY IMPROVEMENT PLAN

Quality improvement plans are activities that establish the objectives and requirements for quality and the application of quality system elements. The plans should be made in such a way that it can be implemented in practice and should focus on eliminating the major problem areas. Quality improvement is an evolutionary process, and can be effectively implemented with a step-by-step improvement plan. As a guiding systematic approach it should include time dimension, such as time for preparation, the actual start of the implementation, observation and checking, investigation and analysis of results. An improvement plan should also include the department, responsibility for implementation and should be informed about the time availability for implementation. The idea of quality improvement is based on the promise that every firm has some weak areas and possibilities of improvement. The firm should find the possibilities which can be digested and provide real nourishment. In this process the improvement plan should pay sufficient attention towards consolidating the strong areas for its better improvement. Generally, improvement plan takes 2-3 years and starts with a single quality plan and goes through implementing suggestion systems, developing recognition and reward systems, rotating job positions for cross training employees, starting a newsletter and other steps towards its ultimate objective of stakeholder satisfaction, both now and in the future.

1.6.3 QUALITY IMPROVEMENT TOOLS

1.6.3.1 Benchmarking: The benchmarking originated in Xerox Corporation of U.S. and extensively used by AT&T, Motorola, Ford and Toyota. It involves the identification of how an organisation is currently operating and identifying the processes, practices and systems. It is a powerful management tool to create a win-win situation to evaluate best practices for improved performance, customer satisfaction and a sustained competitive advantage that may impact on organisational culture by changing people’s attitude and behaviour. It has a transforming effect on the mindsets and perspectives (Wali
et al, 2000). Visible leadership, resource availability, recognising the need for change in structure, strategic focus, clear direction, people involvement at various levels and important process understanding and a learning attitude, can effectively facilitate it. However, it may face barriers with bureaucracy, traditional culture, and lack of employee training and education. It can be an effective catalyst for change and an effective tool for continuous improvement and can stimulate creativity and provide a stimulus that enables operations to better understand how they should be serving their customers. It can be used by both manufacturing and service organisations. It is an aggressive awareness performance practice, which may spread throughout the organisation and lead to the discovery of immediate and incidental improvement opportunities. It encourages major improvements rather than being a simply incremental requirement of existing approaches in ‘beating the best’ (Mohanty and Lakhe, 2002). In essence, it is the process of borrowing ideas and adopting them to gain competitive advantage (Dale et al, 1999). In an organisation, the goals of benchmarking are to increase the performance by (Gohike, 1997):

i) Identifying organisation with best practices as partners;
ii) Measuring and comparing a related work process against partners;
iii) Conducting interviews with benchmarking organisations and;
iv) Adopting their best practices.

An organisation benchmarking with the most successful corporation in the industry to determine where it stands relative to competitors, will collect information to improve process and establish realistic goals. The following prerequisites are the basic for starting a benchmarking practice in an organisation.

i) Benchmarking should be a source of learning, which may be able to reward both parties by reciprocal benefits.

ii) The historical backgrounds should not create hindrances in this process because most of the difficulties are faced by an organisation’s background in acceptance of new information and even they do not know their own practices, routines and from where to start.
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ii) Since success comes to those who persevere, the organisations should adopt it as a source of continuous learning.

iv) Benchmarking should be an ongoing continuous systematic means for measuring and comparing of work process of an organisation. It is not a one time activity and it is not easy as it sounds.

v) Sufficient time should be allowed and teamwork should be fastened.

vi) The success stories are to share across the departments and divisions (James, 2002).

In an organisation, the process of benchmarking through which improvements can be initiated consists of the following steps:

a) Decide what to benchmark with whom and for what purpose

b) Understand current performance in detail.

c) Plan for creating the goal of the benchmarking process.

d) Study others for identifying comparative companies.

e) Learn from the data by determining current performance gap;

f) Project future performance levels;

g) Communicate the findings and gain acceptance;

h) Establish goals and plan to meet them; and

i) Implement actions and monitor progress.

The process of benchmarking shows the following characteristics:

i) Benchmarking is both a window and a mirror because it promoted broad dialogue at all levels about its identity, mission, values, beliefs and practices.

ii) It helps to reduce uncertainty in the organisational environment by reference to peer experience.

iii) It deals with best practices to be drawn from the larger pool of best practices and deals with how rather than what and lead to comparison across industries.

iv) It allows companies to learn from the experiences of those best practices of the organisations, which are in their TQM journey.
v) It poses question like, “Is there any practice or organisation that is performing better than us?”

vi) Every time resulting in best practices, it can create enthusiasm, excitement and commitment throughout the organisation.

vii) It offers opportunities for both market leaders and laggards to increase their market share significantly (Printer M, 2004).

In a typical organisation, the effective benchmarking practices result into (Swanson, 1995):

i) Identification of a benchmarking champion;

ii) Cascading of JIT skills training to create centre of competency;

iii) Co-ordination of projects and interaction with consultants;

iv) Formulation of gateways to outside organisation;

v) Establishment of network, information database and newsletter.

Rosa and Mancini (1997) described four types of benchmarking. In internal benchmarking the comparison of two similar processes within the same firm takes place with the purpose to implement the internal communications into the organisation to clear the shared objectives and functional responsibilities within the organisation. The industry benchmarking represent the cross comparison among the managerial performance of competitors with different products in the same industry, which will give a chance to collect information not disclosed to all competitors about organisation’s performance. The functional or non-competitive benchmarking is the comparison of companies of related function in different business, which needs not to be in the same industry. In generic or best practice world class benchmarking, the best practice of world-class organisation is considered and adopted.

Knuf (2000) divided benchmarking into adoptive, comparative and transformative ways. In adoptive benchmarking, the companies of similar nature adopt the valuable direct knowledge about processes and structures at their own and level the competitiveness without enhancing collaboration. In
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comparative benchmarking, the companies establish more general and permanent baseline performance comparison by charting out their own, independent strategic progress towards the kind of standards that produce outstanding results for their competitors. Whereas, the transformation benchmarking consist of replacing the current business practices with a better one; which may not be conventional, relative or familiar; but may be able to recreate, reinvent the processes and structures and give organisation a new identity.

Benchmarking is an exercise, which can guarantee improvement, if it is implemented properly (Jain, 2000). It is done in a planned and systematic manner that identifies best process to benchmark and studies the same in detail and prepares benchmark goals to achieve. The first step in benchmarking is to identify whether improvements are necessary and to ensure competitors are better in these areas (Anandram, 2001). At root, benchmarking is simply about making comparisons with other organisations and then learning the lessons those comparisons throw up (John, 1998). For that, one must have a clear understanding of where he is and what his history is. It ensures that the best practices are uncovered, adopted and implemented. It is adopted in order to set goals based on superior results achieved by others (Juran et al, 1999). It is a modern management tool to improve the overall quality of a business and it is not end in itself but a means to an end (Murthy, 1999).

For adoption of benchmarking, the adoption of risk is inevitable because if risks are not taken, employees’ ability to adopt methods that they have seen elsewhere is hampered. It has the following pre-requisites: (Bramham, 1998):

1. For comparing, one must have someone and something to compare with,
2. There must be some similarity with the organisation being benchmarked against.
3. Benchmarking assumes a commonality of background conditions,
4. One must take time to understand his internal system, how it works and its strengths and weaknesses.
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Effective benchmarking results into improved customer satisfaction, increased productivity, reduced operating costs, streamlined and developed efficient and effective work process; increased competitiveness; increased utilisation of resources; improved levels of management support, better and faster decision making, effective marketing, accelerated change and improved professional relationship (Singh and Singh, 2003). It acts as a trigger for performance improvement by serving the purpose of adjusting a firm's performance for the relevant industry and economic influences.

For a successful benchmarking certain prerequisites are necessary i.e. alignment with strategy objectives; a rigorous process of plan, analyse, implement and review to be followed; an optional benchmarking partner to be chosen and changes to be implemented after understanding the organisation and its culture. During this process, the limitations, if any, need to be understood.

The main objective of benchmarking is the need to establish credible goals and pursue continuous improvement in the direction where the practices needed to reach new goals are discovered and understood. However, according to Milgram (2000), the prime purpose of benchmarking is to understand those practices that will provide a competitive advantage in the market place. The American Productivity and Quality Centre has given a model that comprises of four stages of benchmarking process i.e. plan, collect data, analyse data and adopt and improve. Whereas, Murthy (1999) has given four phases. The planning phase is characterised to identify opportunities; set priorities; decide on who is the market leader and study their best practices. In the analysis phase identify reasons for poor performance and divide process improvement; and set targets for improved process. The integration phase is characterised to communicate findings and seek management commitment and revise performance goals. And the action phase is with developing action plan for implementation; implement action plan monitor progress and keep the process of benchmarking continuous.

Benchmarking can be carried out within and outside of the organisation. The external benchmarking helps the company to get meaningful insight into well run world class companies, which helps to set targets and accelerate the rate of improvement of the organisation. On the
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On the one hand, external benchmarking is carried out externally across departments and functions in the same organisation, helps to breakdown barriers between them, and creates synergy (synergy of purpose and synergy of action).

In a medium enterprise, the management understanding about its own business processes can facilitate benchmarking where the management takes personal interest in talking and interacting with other companies about how they do things, what are their strengths and weaknesses. These interactions can facilitate adoption of new ideas and technology exploring new markets, overcoming various restrictions and quick learning of new processes and practices.

Definitions of Benchmarking

Benchmarking was pioneered by the American MNC Rank Xerox in the late 1970s and was defined as, "A continuous, systematic process of evaluating companies recognised as industry leaders, to determine business and work processes that represent best practices and establish rational performance goals".

Sarvan (1997) defined benchmarking as a continuous process of comparing own practices; services and products against the toughest competitors or with those recognised as leaders.

Gohike (1997) defined benchmarking as a TQM tool used to measure and compare the work process in one’s organisation with those in other organisations.

Dale et al (1999) described benchmarking as a systematic method by which organisation can measure against the best industry practices.

American Productivity and Quality Centre (APQC) defines benchmarking as, “The process of identifying, understanding and adopting outstanding practices and processes from organisation anywhere in the world to help the organisation to improve its performance”.

Kohoe (1996) described benchmarking as an aid to quality development and leads to comparisons with different types of organisations, which may be at a more advanced state of development or alternatively may have different perspectives. However, there are also potential weaknesses in...
it. If correct measures are not selected or valid comparisons are not made, then it can become a fruitless or distracting activity.

Fernandez et al (2001) described benchmarking as a management technique that has proved to be valuable. It seeks to achieve business improvement by helping organisations and individuals learn and develop. Evolutionary benchmarking is a framework that captures and represents the relevant information for the analysis, planning and comparison tasks.

Printer (2004) defined “benchmarking as a comparative strategy that measures how a particular business process differs from another one that is known to be distinctly superior.”

Criticism of Benchmarking: The followings are the criticisms of benchmarking practices:

i) Copying others is the main criticism of benchmarking. But, how an organisation can be superior if it does not innovate to get ahead of competitors?

ii) Benchmarking is neither a strategy nor a business philosophy but an improvement tool. It cannot be a panacea, which can replace all other quality efforts or management practices.

iii) It is a source of idea from outside the organisation but cannot be substitute for innovation.

iv) It is based on external reality of best in class performance and forces an organisation to set goals according to moving target.

v) A benchmarking organisation always encounters uncertainty not only from its present status, but even so from its unknown future.

vi) The issues of ownership of benchmarking practices are not owned by benchmarking organisation.

vii) The benchmarking practices faces resistance from its members and the “not invented here” syndrome claims the irrelevance and in-appropriateness of the innovation.

viii) Lack of integration will lead to failure due to attitude of “import and forget”.

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1.6.3.2 Employee Empowerment: Employee empowerment is the cornerstone of TQM implementation and is based on the premise that employees perform better only when they are valued and encouraged to contribute their own thoughts in performing of open decision making (Kumar et al 2002). It gives both responsibility to deliver quality and authority to identify problems and then formulate and implement solutions to employees who have the direct contact with the problems (Bhatt, 2002). It also helps to bring the employees into organisational decision-making process (Dale et al, 1999). However for an empowered environment, three conditions are necessary i.e. employees must understand the need for change; the system needs to be changed for the new paradigm; and the organisation must enable its employees.

Dale et al (1999) have defined empowerment as an environment in which people have the ability, the confidence and the commitment to take the responsibility and ownership to improve the process and initiate the necessary steps to satisfy customer requirements within well defined boundaries, in order to achieve organisational values and goals. It means giving permission to the workforce to unleash, develop and utilise their skills and knowledge to their fullest potential for the firm. It benefits a firm by increasing employee motivation to reduce mistakes, increasing the opportunity for creativity and innovation, improving employee loyalty and allowing top and middle management more time for strategic planning.

An organisation should create opportunities to empower its people in an appropriate working condition with challenging and doable jobs, because people are most motivated when challenged to use their strengths to reach goals (Robbins, 2003). An empowered employee knows what their company performance is and focuses on customers because he derives the decision making power from the lowest level, where he stands. In a TQM organisation, the employee empowerment leads to (Peter, 2001):

i) Reduction in absenteeism and turnover;
ii) Reduction in safety related expenses i.e. insurance compensation;
iii) Better feeling with improvement of performance of group and waste reduction;
Empowering employees encourages them to take individual responsibility for their work and to be more proactive in finding solutions for problems as they arise which leads to the achievement of quality goals (Barker and Cagwin, 2000). Employee empowerment can be defined as giving workers the training and authority they need to manage their job (Raibora et al, 1996 & Barker and Kagwin, 2000). It can be ascertained by giving workers the training and authority they need to manage their job where they are encouraged to prevent and detect errors early in the process rather than relying on final inspection. It leads to significant savings by reducing defects and the need for rework.

The objective of empowerment is to liberate the workforce and to encourage problem solving at local level. Empowerment to act is very easy to express conceptually but it requires real effort and commitment on the part of all managers and supervisors to put into practice (White and Pheby, 2000). In practice it may mean encouragement to make even small proposals, the best of which are rewarded in a tangible way to encourage further participation and engagement (Sammalisto, 2001). It is also about building authority, accountability and ownership and creating circumstances, in which inhibitors and constraints are removed, thus allowing the former to be responsibly exercised (Menon, 1992). According to Juran et al (1999), employee empowerment means three things- the employee is in a state of self control as he knows what is expected; the employee is able to make recovery i.e. has freedom within limits, to make things right, when things go wrong and the employee has the opportunity to participate in planning and improving the work.

According to Lesley (2000), for effective employee empowerment, they need to: (a) be convinced that this is really what management want to do; (b) be equipped with the skills to become involved; (c) have their views sought, acknowledged and acted upon; (d) have support within the organisation for
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their improvement activities; (e) be involved in improvement activities which have a real and visible impact on the success of the organisation; and (f) have a system where issues can be raised and acted upon. The key conditions of empowerment according to Juran et al (1999) are: (a) timely and accurate information; (b) trust among the workers and managers; and (c) motivation to act in the interest of quality. Isakson and Spencer (2000) is of the view that everyone in the organisation must be empowered to make the decision necessary to achieve the organisation goal of customer satisfaction; especially those employees who actually deliver the service or produce the product.

In an organisation, the empowerment can be obtained by internal as well as external commitment (Robert and Zolton, 2001). Internal commitment is based on voluntary participation of employees towards organisational goal, management, employees and customers. External commitment is fulfilling the contract of receiving orders and fulfilling it regardless of there own opinion. However, empowerment can neither be reached completely nor a static state of the organisation, it is a little bit abstract good that organisation should strive to achieve as good as it can.

1.6.3.3 Teamwork: Teamwork throughout an organisation is an essential component of the implementation of TQM. It builds up trust, improves communications and develops independence. It is to be demonstrated by top management because without effective teamwork and team spirit at the very top, no amount of preaching is going to help at operating level or even with suppliers and customers. It is a point of the empowerment of staff, as they can make important contributions to the organisation. It is based on the premise that people are most willing to support any effort of improvement in which they have taken part. Teams improve the problem solving by producing results quickly and economically.

Teamwork is the ability to work effectively with others; minimise unproductive conflict, encouraging diverse opinion and constructive debate; and valuing the greater good of the company above personal, unit or functional goals (Wang and Miller, 2000). It will establish a high level of collaboration and mutual dependence (Huxtable, 1995). Teamwork is a
holistic approach to quality management where the new standards requires exchange of information between all staff and help the organisation to identify and record training need, evaluate and review training and achieve the goals of the organisation (Field, 2001).

Widespread use of teams ensures better and quicker solutions to problems, more dramatic and permanent improvement in processes and operations and significantly higher productivity. In a ‘team culture’ people feel more comfortable to surface problems because they know they can get the help of co-workers, plus specialist if needed, to find and implement a solution.

In a TQM organisation, there are three primary types of teams in vogue:

a) **Quality Improvement Teams (QITs):** These are temporary in nature, set up for a short to medium period (usually 3 – 13 months), to address a specific chronic problem, or opportunity for improvement. The members participate in team project in addition to their usual work. The members are usually middle level and upper level managers, engineers or functional specialist. They disband when their task is completed. The QIT are set up to ensure that the quality mentality is installed in everyone within the organisation and there is continuous improvement in the quality system (Pheng and Teo, 2004).

b) **Problem solving Teams (PSTs):** This is also temporary for short period ranging from one week to three months, to solve specific important problems and to identify and overcome the root causes of problems. Members can be anyone with the needed expertise. Such teams are usually cross functional and may be multi site. These teams are also disbanded as and when the task is completed.

c) **Natural Work Teams (NWTs):** It is general grouping that can include commonly used team concepts as departmental improvement teams, self-managing teams and quality circle. This is permanent team, composed of people that naturally work together. It is usually comprised of multiskilled workers who share tasks and responsibilities for a well-defined segment of
work. This team usually meet for one or two hours once a week with a purpose to improve the work with the help of flow charts and other tools for data gathering and analysis.

In India, only about 2-3 days per year are devoted for training per employee; whereas, countries like USA and Japan spend 45 to 55 days per year on training for these employees. In most of organisation, the policy of encouraging competition among individual employees has resulted in degeneration of values and one upmanship that lead to an overall suffered morale. This can be replaced by excellence in teamwork, encouraging team building and teamwork to some extent, which will strengthen organisations, restore lost values and moral which is essential for effective TQM implementation (Ramaswamy, 2000).

1.6.3.4 Just in Time (JIT): JIT is a product and material planning system where the product and procurement closely follow the actual demand. The system demand to produce the goods at the time of requirement in the required quantity. It aims at eliminating non-value added activities of all kinds and achieving a lean production system, flexible enough to accommodate fluctuations in customer orders (Masaki, 1997). According to Hamilton and Smith (1993) the aim of JIT is to produce only what is needed, when needed and the amount needed using a minimum of material, equipment, labour and space. Its philosophy originated from the manufacturing sector and helps to smoothen the production process through the efficient handling of materials i.e. by providing the right materials, in the right quantities and quality. In this, the raw materials are not stockpiled. It requires integrated management systems capable of delivering materials as close as possible to the time they are needed (Milgrani, 2000). It is based on the idea that the buying and manufacturing tasks should be performed when required, not early or too late (Menon, 1992). Techniques to facilitate JIT are waste elimination, Kanban, Poka-yoke, production smoothing, 5’S’, VCs, SMED, CEDAC, and Jidoca. Here SMED (Single Minute Exchange of Dies) is aimed to reduce all factory set-ups by 59/60ths. Poka-yoke is mistake proofing. VCs are visual control systems i.e. EXIT or HARDOUS. CEDAC is a cause and effect diagram.
Japan, JIT systems put more emphasis on customers, flexibility and problem prevention (Prasad and Tata, 2003).

Successful implementation of JIT system leads to lower inventories and the production of defect free products become critical to the manufacturing process. However, successful implementation of JIT system is dependent on successful implementation of TQM systems. JIT and TQM are considered as two sides of the same coin; while JIT provides an organisational framework for the exposure of waste and problems, TQM provide an organisational framework to solve these problems (Mahadevan, 1997).

In Indian scenario, JIT requires special training, redesign and restructuring of the machine shops, modern and automatic equipment, and transformation of workers into multipurpose workers, creating positive human element, re-organisation of policies and procedures and indoctrination of people. Presently the following factors contribute to the non-availability of smooth operation of JIT system:

1) Technological backwardness of Indian industry;
2) Inconsistent quality;
3) Poor worker management relations;
4) Lack of self-discipline in workers,
5) Unpredictable market forces affect demand forecasting,
6) Disproportionately large number of items;
7) Suppliers’ unreliability with regard to quality and delivery time,
8) Poor company supplier relations,
9) Multiplicity of suppliers, poor transport system and more distance between company and supplier.

In view of the above, in the Indian context, the environment is not feasible for JIT and medium enterprises need not be too ambitious and should not jump into it without understanding. They should assess the benefits from the system that should be more than the existing system before its introduction.
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1.6.3.5 Kaizen: The word Kaizen originated from the Buddhist term meaning ‘renew the heart and make it good’ (Milgram et al, 2000). It also means gradual and orderly continuous improvement with the involvement of everyone in an organisation by working together to make improvements without large capital investments. The Kaizen strategy begins and ends with people. Kaizen practice involves the deployment of people, methods, tools and time where tools are statistical tools with professional skills and common sense. It is a culture of sustained continuous improvement focusing on eliminating waste in all systems and processes of an organisation. It also focuses on improving the working standards through small, gradual improvements (Diwan, 1995). It does not necessarily call for a large investment but great deal of continuous effort and commitment and is an ongoing effort with cumulative effect making a steady rise with time (Sharma, 2000). It is also an attitude; a spirit that prevails at all times in the companies. It is based on common sense and low cost approach. Although improvements under Kaizen are small and incremental, the Kaizen process brings about dramatic results overtime, which explains ‘why companies cannot remain static for long’ (Masaaki, 1997). The Kaizen transforms companies into ‘Superior global competitors and its approaches involve JIT (Just in Time), first time quality, TPM (Total Production maintenance) and administrative improvement.

Most of the TQM principles are rooted in Kaizen, which has been called as single most powerful Japanese management philosophy by better customer service and it means confirmed and gradual improvement. Kaizen is a way of thinking and behaving and provides guidelines for individuals and teams in the ‘Company Family’. The key concept within Kaizen is that change is endemic, nothing is static, there is no status quo and everything is to be reviewed continuously (Patricia, 1995). In a Kaizen Company, a cross functional team is inevitable because no individual or single function team will have all the skills or best idea to efficiently manage a project. Like all companies, Kaizen companies have also problems but by fostering an appropriate, supportive, constructive, non-confrontational and non-recriminatory culture it becomes possible for every team to bring its problems into open. However, the main difference between Kaizen and TQM is that
Kaizen does not depend on specialist groups (as TQM) but on every employee individually.

**1.6.3.6 Quality Culture:** Quality culture is the system of norms, shared values, concerns, common beliefs that are understood and can act as a prerequisite in developing, controlling and improving the quality in an organisation. Culture can be defined as the system of basic assumptions found or developed by the organisation during its history (Kakale, 1996). Sarvan (1997) defined organisational culture, which supports the constant attainment of customer satisfaction through integration system of tools, techniques and training and involves the continuous improvement of organisational process, resulting in high quality products and services. Love et al (2001) emphasised that the quality culture of the organisation affects the intra and interpersonal cooperation; use statistical analysis tools in managing process and operations; provide support and encouragement for continuous improvement; and good record keeping and documentation.

Culture can be classified into three styles: constructive, passive and aggressive, where each style has its own behavioural norms. In a constructive culture employees are encouraged to interact with one another and work in team setting, show a direct and positive relationship with the successful implementation of TQM. It also facilitates people to work in teams. In respect of soft and hard aspect of culture, the hard aspect of culture in respect of TQM implementation are production techniques, SPC, changes in layout, design processes and procedures, JIT inventory control and seven basic TQM tools used to interpret the data, whereas, the ‘soft’ aspect of culture include customer awareness, customer care programmes, employee involvement and commitment.

The culture of the company has a major impact on the opportunities of TQM application. In most companies, implementing TQM takes long time because it requires an appropriate cultural change at the company. It has been seen that the companies whose culture is closer to the philosophy of TQM, finds it easier to apply TQM at faster rate because they need not transfer their culture, but they had the chance to build a TQM culture from the start (Nemeth, 1999). Here the change in the culture of an organisation may include the change in organisation member's values, beliefs and norms. A
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Quality culture requires quality in all aspects of the company’s operations because culture affects the final product. For a successful TQM adoption the cultural change i.e. a change in management style and a change in the way both people and systems required (Lord and Lawrence, 2000).

TQM calls for a cultural transformation, which requires employee involvement at all levels and a spirit of teamwork among customers, suppliers, employees and managers (Eng and Yusof, 2003). According to Love et al (2000), for alignment of culture with TQM, culture needs to be nurtured and integrated with current organisation practices. They also emphasised that before implementing TQM, management needs to determine whether a change in culture or a change in behaviour of the organisational employees is needed. However, effects of TQM on organisational culture should not be underestimated because if an organisation fails to change its culture, then TQM may not provide the benefits as initially expected.

In an organisation, the following characteristics of culture help successful TQM implementation:

i) Culture refines, adopts and enriches an organisation by making each organisation unique (Miller and Felstead, 2001).
ii) It is a soft system of an organisation, which constitute people.
iii) It must be supportive with commitment and involvement to facilitate successful employee empowerment.
iv) It is the results of the beliefs, behaviour, norms, rules, climate, traditional status symbols, practices and values of its employees.
v) It can affect the orientation of managers towards customer focus and satisfaction (Prasad and Tata, 2003).
vi) It emerges at various levels within an organisation as employees learn to solve problems and cope with life expectations (Naidoo, 2002).
vii) It is a key element in the introduction of systematic change.
viii) The multiple cultures take more time and difficult to change.
ix) A TQM organisation requires a work culture i.e. a culture of excellence, where members respect themselves and others (Sornam, 2003).
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x) It is a major variance-causing factor inhibiting or supporting successful TQM implementation.

xi) It varies from industry to industry but its effective implementation lead to securing market share and increased profits at reduced costs.

However, for the overall success, TQM implementation process should be consistent with the existing culture. Later with the creation of new job responsibilities, team roles and process driven environment, organisation can better manage by offering a learning culture. To create a learning culture, organisations need to become a learning organisation, which may have the capacity to continuously learn from its experiences and translate that knowledge into improved performance and competitive advantage.

For an organisation to become superior in quality, it needs a culture throughout the organisation that continually views quality as a primary goal. It includes leadership, personal involvement, consistence, elimination of blames, data based decision, changing culture through actions, participation and by providing time (Dalela and Saurabh, 1999). It is the pattern with the emotional scenario of human habits, beliefs and behaviour concerning quality. Anandram (2001) described following aspects as prerequisite for developing a total quality work culture: a) commitment and participation at all levels, b) problem sensitivity, problem solving and problem prevention; c) Empowerment, d) teamwork (particularly cross-functional); e) process oriented approaches; f) people oriented policies; g) continuous training and development of employees; and h) good housekeeping practices.

To develop TQM a quality culture needs to be attained which can portrait the whole company. TQM aims to achieve ‘Total Quality Culture’ by using several techniques such as cause and effect analysis and Pareto charts which are aimed at helping organisations to process information effectively (Chileshe and Watson, 2000). According to Tiwary (2000), TQM is to be adopted as culture and for this; one should keep in mind the followings:

a) The requirement of customer and to fulfil the same immediately;

b) No compromise with the quality of the product or services;

c) Necessary technological changes in product or services; and

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d) Future requirements of the customers.

Quality cultures do not arise simultaneously, nor do they arise overnight. They require a genuine commitment at all levels within the organisation, particularly at the top, to team work, individual capability, responsibility, multi-dimensional communication, effective systems of recognition and reward, leadership and a sense of shared vision (Nigam, 2000). The history and organisational structures interfere with the existence of quality culture, and required change for organisational existence. However, they are not easy to change. It may require many people to do many things very differently from the ways in which they have been done in the past. Quality culture grows painfully, slowly, but it can die in an extremely short period of time (Nigam, 2000).

Successful TQM implementation can be done internally without much external help by changing behaviours and with supportive cultures. However, if an organisation culture can perform, as it is appropriate to that level of organisation, it will build up energy and competence for transforming the organisation to the next higher level of existence (Chuan, 1997). Souza et al, (2001) explored the impact of cross cultural differences on the facilitating effects of corporate culture on the implementation of TQM and identified the relationship between corporate culture and TQM for each region and results show that in each region, several distinct relationships between the dimensions of TQM implementation and corporate culture exist. However, the achievement by a successful TQM system in an organisation is not easy and it requires a change in the organisational culture (Glover, 1993). Juran et al (1999) described the following steps that can build a strong quality culture:

a) Collect information to determine the present quality culture.

b) Take the steps necessary to change the culture.

In Indian context, developing a proper work culture is the toughest job as we have a serious problem of employees not being able to relate themselves with the organisation in a constructive and collaborative way (Anandram, 2001). However, in the process of TQM implementation in an organisation, culture is a major condition but not the only condition to lead the TQM. To be effective, culture of a company cannot be changed in one day.
and needs to be progressive, with proper planning of every step in advance (Sharma, 2000).

**1.6.3.7 5'S Practices:** As a concept it was introduced in Japanese organisations in 1980s but now it is being practiced in all sort of organisations around the world. The 5'S' has gained tremendous importance because of simplicity, inexpensiveness and systematic approach to house keeping. It is based on attitude development and provides the foundation for introduction of all other advanced productivity and quality improvement programmes for building positive work environment. It leads to cleaner, better, safer workplace for continuous improvement efforts to flourish and helps retain good employees, achieve reduced wasted time, materials and maintenance downtime. It also helps improving efficiency; morale, response time and creating conducive work culture. The top management commitment is prerequisite for 5'S' implementation (Vershney, 2003).

5'S' represent Seiri (proper arrangement), Seiton (Orderliness); Seikwetso (Personal cleanliness); Seiso (Clean up), and Shitsuke (discipline). A 5 'S' workplace is high in productivity, has high quality, keeps cost down, ensures delivery on time, is safe for people to work and is high in morale. As 5 'S' practicing firm keep neat and clean surroundings, by assigning responsibility to employees for cleaning one's own working area where they can be in good mood for work. Samuel and Svetlana (1996) suggested that the cleanliness and orderliness results from organisation’s ability to instill a sense of responsibility and discipline into their workers, particularly at plant level. They also described 5'S' practices as the logic behind organisation’s neatness, cleanliness, standardisation and discipline at the workplace and as the basic requirements for producing high quality products and services with little or no waste, while maintaining high levels of productivity.

**1.6.3.8 Kanban:** Kanban is a single inventory control system that reintegrates information flow with material flow (Hamilton and Smith, 1993). It means 'visual record' and can be referred as card system. The Kanban is an important part of JIT implementation in an organisation. It is based on the principle of single part movement from one worker to another production line
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only when required and eliminate the chances of storage in production line. It is a chain process where components are ‘pulled’ to the production line by moving the cards and producing only the required number of items, which helps keep the production costs low. According to Sirisha (2003) the significant advantages attached with Kanban includes:

i) A simple and understandable process;
ii) Provides quick and precise information;
iii) Low costs associated with the transfer of information;
iv) Provides quick response to changes;
v) Limit of over capacity in process;
vi) Avoid over production;
vii) Minimise waste;
viii) Control can be maintained; and
ix) Delegate responsibility to workers.

1.6.4.9 Training and Development: The training and development is an effective participative effort, provides the necessary skills and knowledge to make the things happen as desired. Training is critical component of work force management because it is a impossible to improve any organisation’s operations without a well-trained work force (Kaynak, 2003). Training is very important for employees to be highly productive and requires interpersonal skills, ability to function within teams, problem solving, decision-making, job management and performance analysis and improvement. Training transforms employees into problem solvers (Kaynak, 2003), which is necessary for improving processes and must be continuous for the implementation efforts to be sustained. Training also helps to build an environment of co-operation, competitiveness, teamwork, and innovative ways of doing things where every employee learns to shoulder more of responsibility for effective improvement. It requires a significant investment by organisation in training the individuals about the new tools. In a TQM organisation, training of the deployment of TQM systems creates an excitement about the quality process among all stakeholders, employees and staff. Training also helps employees to think creatively. But, Lock (1996) is of
the view that training should be provided only when there is clearly defined needs to be satisfied. These needs may be as follows:

i) The need to improve the general quality of products or services;
ii) The need to improve a specific aspect of quality; and
iii) The need to learn to use a quality control or quality improvement system.

**Need of Training:** The need for a comprehensive training is associated to gain additional capabilities to improve the organisation with everyone, when employees are required to gain additional capabilities to improve the process. It prepares employees for new challenges—lie ahead (Zheng and Dolken, 2002) In a TQM organisation, the training may include TQM philosophy, group problem solving, behavioural skills, teamwork, guiding principles, SPC tools and techniques. It should be imparted only as is needed, to the people who will use it immediately. This training of employees should be followed by specific training to management people, because once they have the skills to lead the TQM process, the rest of the organisation can be trained to ensure a systematic, integrated and consistent organisation wide effort. The trained employees can solve their problems related to their workplace using the quality concepts and tools. To be effective all employees should receive formal and continuous training in both total quality concepts, tools and job specific information (Barker and Cagwin, 2000). They should be trained and shown how to reallocate their time and energy to studying their processes in teams, searching for causes of problems and correcting the causes not the symptoms, once for all.

In a TQM organisation, training is beneficial in the following ways:

i) The starting of training brings new hope and excitement about the TQM system.
ii) Training helps employees to become creative problem solvers with easier communication.
iii) Training helps change in attitude and it included in the part of life of employees, where the employees carry the concepts wherever they go (Mohanty and Lakhe, 2000).
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iv) Training makes employees more self-sufficient in quality matters and in turn they become better able to meet future competition.

v) Training helps to provide quality products.

vi) Training creates vision and understanding among employees.

vii) A creative training and development will help to grow organically by shaping their personal development and enabling them to develop ‘macro’ skills which can be adopted to meet changing organisational needs (Thorne and Machray, 2000)

Importance of Training: In a TQM organisation, the importance of training can be established simply because it helps to provide quality product. Successful organisations emphasise on worker satisfaction, motivation and ability to act as a constructive part in the process of continuous improvement depend on training. Deming also stresses on employee education and training in his famous fourteen principles. Although in short term, education and training may costs money, but in the long term, they yield economic returns with the competitive strength of its people. For effective utilisation of manpower, the effective training of basic quality management tools provides a systematic and disciplined approach to problem solving in an organisation. The basic quality tools include cause and effect analysis, flow charts or process flow diagrams, Pareto charts, Run (trend) charts, Histograms, Scatter diagrams, and Control charts. To be effective, the training plan should be drawn up in line with the firm’s strategies, objectives, available resources, current employee’s skills and their job requirements. Training should be relevant, flexible and affordable and should also be geared to specific, clearly defined objectives, must be prepared as close as possible to the time it is required and is reinforced to ensure its desired results.

Role of Trainer: In a TQM organisation, the trainer plays a crucial role in imparting desired training to the personnel at different echelons of the organisation. He may require taking a number of roles: trainer, facilitator, mentor and innovator. As a trainer, he may require the ability to help people learn with the help of OHP (overhead projector), flipcharts, workbooks, exercise, through training sessions of short term to even a five-day
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programme also. As a facilitator he has to carefully observe the group activities, ensuring that everyone has the opportunity to participate and take part in the discussions. To fulfill the objective, he may facilitate the group to a satisfactory conclusion within the specified time period. During this process, he may have less contribution, except using open questions to move the group forward, clarify key points and recording important decisions. He has to train other trainees or as a mentor, he may also act as trainer of facilitators and a trainer of innovators. As a mentor, he should be very experienced and it is expected that he should help individuals grow and develop through the use of shared experience, open questioning and exploration of new ideas and concepts. As an innovator, he will introduce the trainee to something completely new, perhaps outside his comfort zone, but in doing so, learner may experience learning, which may stay forever and as a directive. It may help to overcome fear and a move from the status quo. As a coach, innovator will help to move forward with encouragement, positive feedback and carefully planned learning experiences. The innovators help to look at the world with different eyes.

Characteristics of a TQM Organisation that facilitates training: The TQM organisation bears the following characteristics, which facilitates training.

1. A TQM firm is particularly adapt at incremental change because there will always be changes in customer preferences, technology and process (Cole and Mogab, 1999).
2. TQM firms devote a significant number of hours per year to formal training and education, not only in the job people are currently doing, but in ‘cross training’ for other jobs as well.
3. TQM organisation creates synergies with full participation of all parts of the organisation (Stoner and Werner, 1995).
4. TQM organisations show a high level of education and training relative to other companies in their industry group (Stoner and Werner, 1995).
5. TQM organisations show a solid understanding of TQM concepts, tools and a habit of using them regularly.
6. TQM organisations show a positive training of the world by being constructive, optimistic and trusting, seeing opportunities, instead of
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problems and relying on others to act in good faith and with a similar high degree of commitment.

7. TQM organisations show broad organisational experience and perspective by having a good sense of the entire organisation and how the pieces fit together.

8. A TQM organisation encourages individuals to take the initiative, to respond positively to challenges, and to recognise the very real threat posed by competitions in the way of improvement drive.

Pre-requisites for Training and Development in a TQM Organisation: In a TQM organisation, training is necessary not only to meet the changes in technology, but to the changes involving the environment, in which the organisation operates. To be effective, the training and development should be planned along with following prerequisites:

1) The responsibility of training and reviewing to be allocated to managers with proper reporting relationships.

2) The training objectives should be defined in terms of meeting customer requirements, business objectives, demand improvement and planned changes (Oakland, 1999).

3) The training needs to be specified in terms of for whom, how long, sense of urgency, required competencies and expected benefits. The duration of involvement and requirement of resources are also to be specified.

4) The training programme to be prepared with objectives in terms of desired behaviour, content, adopted methodology and responsibility for programme.

5) Line managers should assess the training results by reviewing performance after completion of training.

6) A positive climate should be developed where people can learn more with pleasure and better job involvement.

7) The organisation should be supportive and willing to be benchmarked against someone.
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8) A training programme should take into account of specialist, methodological and social aspect and should fit in with the organisational elements of the learning organisation.

9) The trainer and learner, both should feel encouraged to excel in their ability to create a very special learning experience.

10) Trainers should be curious, have a thirst for knowledge and seek to be inspiring, innovative and wanting to lead.

11) The people attending the training session should know the project outcome of the programmes.

12) Trainers should believe in themselves, have a positive mindset that can excel in their desire to inspire their learners, be focussed on goals, keep visualising the success and experience what success feels like.

13) Trainer should be aware of the importance of providing value for money, spent on training.

14) Trainers need to be able to harness their creativity and channel it appropriately to help develop training excellence for their organisation or their clients.

1.7 TQM AWARD MODELS

The models are generally simplified version of complex situations and reality and suggest that there is simple and new relationship between complex phenomenons. The models help to assimilate information, formulate knowledge about a situation and manage it. It also helps determine where operation breakdown occur, why they occur and how they can be prevented. It enables management to identify quality shortfalls, plan the launch of a TQM programme and assist in evaluating the strengths, weaknesses and opportunities for targeting improvement areas to the user organisation. The various advantages attached with TQM models are: a) providing an overview of factors affecting quality; b) helping in better understanding of QMS; c) helping in preparing a framework for launching quality improvement programmes and d) channelising organisational efforts in appropriate direction. Mohanty and Lakhe (2002) outlined the characteristics which helps to facilitate the TQM models in its widespread acceptability includes enabling


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the management to identify resources, facilitating the identification of quality problem, pin pointing the causes of the observed quality problem and suggesting the possible courses of action. According to Gallear and Ghobadian (2000), the factors contributing to the persistence and strength of the TQM model includes

i) Recognition and demonstration of the importance of ‘quality’ as a source of superior competitiveness;

ii) The success of Japanese firms in taking and retaining market share from their western counterparts;

iii) Influence of teaching and writings of Deming, Juran, Crosby, Feigenbaum and other scholars;

iv) Introduction of internationally recognised quality awards such as Deming Prize, the MBNQA, European and Australian quality awards.

Quality Award Models reflect methods of achieving quality and have become prestigious with their benchmarking characteristics. These models provide a general model of TQM by simplifying reality, showing linkages between different organisational activities and by allowing predictions based on different performance measures. The quality awards are offered either to individuals or to organisations, depending on the type of award. They measure the result of quality activities i.e. customer satisfaction against certain criteria. Most of the awards are based on self-assessment that helps to locate the bearings of an organisation with respect to an ‘excellent’ business model and identify the gaps that need to be bridged (Frangou, 2002). The awards are organised at international, national, local government, regional level and by trade or professional bodies. Example of international awards includes MBNQA Award, EFQM Award, Deming Prize and Asia Pacific Area Golden Quality Award. Many opted for awards for publicity reason but for many it is the process of applying as its right. At the same time many enter either for financial benefits, improved performance, morale, reduction in wastage, minimised environmental impact and so on. However, the award winning in not always advantageous for all and many a time entering for awards leads to certain disadvantages that may include: a) an
expensive effort, b) in case of failure to get award, an increased political infighting in company, c) a further more negative morale building in addressing a problem, in case of failure to get award, d) a further detraction of publicity value and e) even many award winning companies face problems in sharing their best practices either due to the trade or company secret involvement. However it is expected on the part of award winning companies to promote their best practices.

To avoid any embarrassment, the organisation applying for an award should assure that it highlights bottom line benefits alongwith genuine commercial reason for award application. Before applying, the organisation should start getting the details from the organisers, reading them thoroughly and start preparing application. The idea must be thoroughly discussed with Board of Directors and its commitment obtained. In all respects, the award must be appropriate to the organisation.

The award models have certain limitations, which may be as follows:

i) Award models are not a panacea for all organisation ills but awards can act as pills on which some of the successful business can be managed.

ii) The process cannot translate automatically into profits but it can help to set the house in order.

iii) The awards are not indicators of previous or future performance.

1.7.1 INTERNATIONAL LEVEL QUALITY AWARD MODELS

1.7.1.1 MBNQA (Malcolm Baldrige National Quality Awards)

The MBNQA Assessment model is exhaustive and comprises of seven criteria, each having several subcriteria. Each criteria / sub criteria is assigned a score that reflects its importance on a scale of 1000. The MBNQA was created on 20 Oct, 1987 and introduced in 1988, by US Government under Public Law 100-107 and is administrated by the National Institute of Standards and Technology. US President gives this annual national award annually to US companies for their excellent performance in the area of quality and quality management. The award promotes understanding of the requirement for performance excellence and comparative improvement,
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sharing of information on successful performance strategies and the benefits derived from using these strategies (Dale et al, 1999). The goal of the award is to provide a business framework to assess them and promote quality practices. There are five categories: manufacturing, service, small business, health care and education and there are two awards given each year in each category. These awards help to improve quality and productivity in the U. S. by gaining a competitive edge through increased profits and recognising the achievement of those companies that improve the quality of their goods and services by providing an example to others (Kanda et al, 2002). This award provides a plan to keep improving all operations continuously and a system to measure these improvements accurately. Some of the receivers of these awards include IBM, Motorola and Ritz Carlton Hotels. The award criteria are reviewed and updated each year by experts who reach consensus on the categories and the weights assigned to each criterion. However, broad criteria remain the same that facilitate industries to fully capturing the whole of TQM (Barker and Cagwin 2000).

MBNQA has been taken as the reference model to compare other national and international awards. It has identified seven broad dimension alongwith applications in which an organisation must excel. These are leadership, information analysis, strategic quality planning, HRM, quality assurance of products, process, quality results, and customer satisfaction.

1.7.1.2 EFQM Excellence Award Model

European Foundation of Quality Management (EFQM) established in Sep' 1988 with the support of European Commission to promote outstanding performance in European organisations and gain broad acceptance among both profit making and non-profit making organisations. EFQM model is a framework of self-assessment and provides a set of criteria that can be applied to an organisation or part of an organisation. It allows the organisation to identify clearly its strengths and areas of improvement. EFQM award criteria are developed in Europe in 1991 and since 1992 the award was given to those European companies, which shines in the area of Total Quality. It allows the organisation to identify clearly its strengths and areas of improvement. This model recognises that there are different ways to attain
excellence, where ‘excellence’ can be defined as “an outstanding practice in managing the organisation and achieving the best based on a set of fundamental (TQM) concepts” (Kennedy and Murphy, 2002). The EFQM model assesses organisational performance through measurement of whether they are on the path of excellence; helping them understand the gaps; and stimulating solutions to bridge the gap. It is a non-prescriptive framework based on nine criteria, five of these are ‘Enablers’ and four are ‘Results’. The ‘Enablers’ criteria cover what an organisation does and the ‘Results’ criteria cover what an organisation achieves. This model represents that excellent ‘Result’ in respect of performance; customer satisfaction, people and society can be achieved through the partnerships, resources and processes. In Figure 4.1, the interconnections with arrows show that innovation and learning helps improve ‘Enablers’ (Kanda et al, 2002). The EFQM model is a practical tool to measure the path of excellence, identify the gap and then stimulating them for solutions. The mission of this model is to be driving force for sustainable excellence in organisations through the systematic identification and promotion of business practices. The goal of EFQM is to let quality play a pivotal role so that the European industry can take in a stronger position on the world market (Does et al, 1999). In India Confederation of Indian Industries has adopted this model for CII Award for Business Excellence (CII-ABE).

**Fig.1.4: The Excellence Model**

**The Excellence Model**

<table>
<thead>
<tr>
<th>Enablers (50%)</th>
<th>Results (50%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>leadership (10%)</td>
<td>people results (9%)</td>
</tr>
<tr>
<td>policy and strategy (8%)</td>
<td>people results (9%)</td>
</tr>
<tr>
<td>processes (14%)</td>
<td>customer results (20%)</td>
</tr>
<tr>
<td>partnerships &amp; resources (9%)</td>
<td>society results (6%)</td>
</tr>
<tr>
<td>people (9%)</td>
<td>key performance results (13%)</td>
</tr>
</tbody>
</table>

Source: www.efqm.org
1.7.1.3 Deming Prize

Deming prize was established in 1950 and administered by JUSE (Japanese Union of Scientists and Engineers). Mr. Joji Yamawaki designed the model. Its award criteria were developed in Japan in 1951 and are awarded in four categories i.e. persons, large concerns, small companies and company divisions. The ten factors on which Deming Prize is based are: Policy; Organisation and its Management; Education and Dissemination; Information on quality; Analysis; Standardisation; Control; Quality Assurances; Results; and Planning for future.

1.7.1.4 Iceberg Model

In this figure, the want of TQM is depicted where the visible world of quality consists of everything that is obvious to everyone i.e. QMS certificates, scrap inventories, waste of material and workforce etc. They represent one seventh of an iceberg. Their causes are many and diverse and make up the rest. This is called invisible world of quality.

Fig.1.5: The Iceberg Model

The Iceberg Model

or the visible and the invisible world of quality

Feigenbaum
Deming
Ishikawa
Crosby
Taguchi
Juran
Masing

ISO 9000
EQA
EFQM
EMS

reliability
measurement
process
orientation

7 QM tools
7 M tools
business
cost of quality

excellence
internal customers
relationship
1.7.1.5 The Bucket Model (For Economic Aspect of TQM)

This model shows that the profit or loss results by simply comparing expenses with returns. To be attractive, the products and services supplied should be of utmost possible value to the market and the customers.

Fig. 1.6 The Bucket Model

1.7.1.6 The ISO 9000: 2000 Model

Revised ISO 9000:2000 model of quality management is a new pattern based on processes where customer requirements are transformed to customer satisfactions by a management system. In this not only the structures of the standards but also basic principles have changed and the most important are:

i) Process orientation for quality management system is recommended;

ii) Continuous improvement of products processes and the QMS shall be the main objectives of the top management;

iii) The management shall control regularly main process outputs;

iii) Requirements for management system documentation have been strongly recommended.
1.7.2 NATIONAL QUALITY AWARD MODELS

Like other governments of developed and developing country, the Government of India has also recognised the value of promoting quality and have established to recognise leaders. The requirement of these awards can have an impact on the type of information considered important and award criteria can become an indicator of product quality. All the Indian quality models are derived either from MBNQA or EFQM.

1.7.2.1 Rajiv Gandhi National Quality Award:

In 1991, Bureau of Indian Standards (BIS) instituted this award after late prime minister Shri Rajiv Gandhi, with a view to encourage Indian manufacturing and service organisations to strive for excellence and giving special recognition to those who are considered to be leaders of quality movement in India. This award is intended to generate interest and involvement of Indian industry in quality programs, drive out products and services to higher levels of quality and equip our industry to meet the challenges of domestic and international markets. This award consists of four awards and is given for large scale manufacturing organisation, small scale manufacturing organisation, service sector organisation and one for best of
all. According to Kanda et al (2002), Rajiv Gandhi National Quality award helps Indian industry to improve quality by:

- Encouraging Indian industry to make significant improvements in quality for maximising consumer satisfaction and for successfully facing competitions as well;
- Recognising the achievements of companies who set an example of quality improvement;
- Establishing guidelines and criteria to help evaluate the quality improvement efforts of industries by their own;
- Providing specific guidance to desirous industries for achieving quality excellence by making available the approaches adopted by award winning organisations to change their culture and achieve eminence.

1.7.2.2 Golden Peacock Award

In Feb'91 Institute of Director (IOD) instituted Golden Peacock award to encourage total quality improvements in commercial, industrial as well as service organisations. It is presented in five categories, which includes public and private undertakings, all sectors of industry and commerce, government and professional associations, educational, service and research establishments.

1.7.2.3 The CII-EXIM Award For Business Excellence

The CII and EXIM bank with their collaboration instituted and announced ‘CII-EXIM Award’ in 1994 at the second quality summit. It is based on European quality award – EFQM Award. The purpose of this award is to set a challenge for industry to scale new heights of quality and leadership by creating role model organisations.

1.7.2.4 IMC-Ramakrishna Bajaj National Quality Award

The Indian Management Chamber instituted this award in 1995 with the aim to promote quality standard, both in process and product among Indian organisations and to make them achieve global standards. This award
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follows MBNQA criteria to suit Indian conditions with special focus on exports, innovation, environment and safety.

1.7.2.5 Tata Business Excellence Model (TBEM):

TBEM started in 1994, with aim of overhauling the Tata groups' systems and process and comprised core values like customer driven excellence, focus on future, organisation agility, management by fact, managing for innovation, valuing employees and partners and visionary leadership. The objective of TBEM was to facilitate every Tata Group Company achieve business excellence and establish themselves as leaders in their respective industries. Tata group companies are supported to initiate evaluation based on award criteria, which may create quality awareness, customer orientation and leadership excellence for leading towards recognition as the best.