

TQM: A Quality and Performance Enhancer

¹Laxmikumari ²Dr Y vijay kumar ³ Dr. V.Venkata Ramana

¹ Assistant Professor, Department of Mechanical Engineering, Ballari Institute of Technology and Management, Hospet Road, Allipura, Bellary 583 104, Karnataka, India

² Principal, Department of Mechanical Engineering, Shiridi Sai Engg College Bangalore, Anekal Karnataka, India

³ Professor, Department of Mechanical Engineering, Ballari Institute of Technology and Management, Hospet Road, Allipura, Bellary 583 104, Karnataka, India

ABSTRACT: The present day industry is facing a very aggressive economic situation. In order to stay competitive it is a must to explore new styles to manage excellence in business. This paper primarily discusses one of such techniques called total quality control (TQM), the various concepts of TQM by highlighting the different dimensions, approaches and benefits in detail. Further states the need and importance of TQM in overall organization enhancement along with brief description of history. The survey also reveals the benefits of implementation of this technique that show positive impact on the performance of any organization. In addition, presents a research problem that was identified, which states that TQM can be put into practice by small scale industry so as to reap the benefits of TQM as a research proposal.

KEY WORDS: Quality, approach, excellence, dimensions, impact

INTRODUCTION:

Total Quality Management (TQM) is an enhancement technique to the traditional way of doing business. It is a proven technique to guarantee the survival of any business in a world class competition. Broadly TQM can be defined as managing the entire organization so that it excels in all dimensions of products and services that are important to the end user i.e., the customer. TQM is a participative, systematic approach to planning and implementing a constant organizational improvement process. Its approach is focused on exceeding customer's expectations, by identifying problems, building commitment, and promoting open decision making among workers and each are essential for successful implementation of this technique. To remain competitive in these extremely aggressive economic situations that exist in today's industry/companies must look for excellence. This technique, unique of its kind with various approaches will act as catalyst. This new style of management helps in achieving the excellence which focuses on several factors such as cycle time reduction, employee involvement, reduction of waste, continuous improvement, and customer satisfaction.

History:

The roots of TQM can be traced back from 1920s when statistical theory was first applied to product quality control. This concept was further developed in Japan in the 1940s led by Americans, such as Deming, Juran and Feigenbaum. The focus widened from quality of products to quality of all issues within an organization, is the beginning of TQM. The order of history is , from inspection to business excellent, i.e., Inspection, Quality Control and Statistical Theory, Total Quality, Total Quality Management, Quality Awards and Excellence Models and Business Excellence. The term 'total quality' was used for the first time in a paper by Feigenbaum at the first international conference on quality control in Tokyo in 1969. In the 1980s to the 1990s, a new phase of quality control and management began, and known as Total Quality Management (TQM). Having observed Japan's success of employing quality issues, western companies started to introduce their own quality initiatives.

Definition:

TQM is a comprehensive and structured approach to organizational management that seeks to improve the quality of products and services through ongoing refinements in response to continuous feedback. The requirements may be defined separately for a particular organization or may be in adherence to established standards, such as ISO 9000, ISI, etc. The origin of this technique is from manufacturing sector and can be applied to any type of organization. Since origin, has been adapted for use in almost every type of organization imaginable, includes large to small scale industries, telecommunication industry, highway maintenance, hotel management and many more. As a current focus of e-business, TQM is based on quality management from the customer's point of view also.

Dimensions of TQM

SL. No	Parameter	Description
1	Performance	This is a primary operating characteristic that determine 's how well the product or service performed the intended function
2	Features	Secondary characteristic .added Features, such as remote control
3	Conformance	Meeting specification or industry standards, workmanship
4	Reliability	Consistency of Performance overtime average time for the unit to fail
5	Durability	Useful life ,includes repair
6	Service	Resolution of problems and complaints ,ease of repair
7	Response	Human to human interface, such as the courtesy of the dealer
8	Aesthetics	Sensory characteristic, such as exterior finish
9	Reputation	Past Performance and other intangibles, such as being ranked first

Approaches in TQM:

The following are the successful approaches of TQM which were implemented by many organizations,

- Improvement of means
- Work force skill , motivation ,innovation
- Quality ,productivity, process performance
- Knowledge ,adaptability ,flexibility, change
- To build competence
- Truth, beauty and god
- Process oriented
- Proactive, dynamic, continuous change
- Rational networking
- System optimization

Functions of TQM:

The major functions of the TQM are as follows,

- Planning,
- Organizing,
- Staffing,
- Directing and Controlling

Benefits of TQM:

The benefits of total quality management are endless, helping any organization get better results. The following are few of them,

- Strengthened competitive position
- Adaptability to changing or emerging market conditions and to environmental and other government regulations
- Higher productivity
- Enhanced market image
- Elimination of defects and waste
- Reduced costs and better cost management
- Higher profitability
- Improved customer focus and satisfaction
- Increased customer loyalty and retention
- Increased job security
- Improved employee morale
- Enhanced shareholder and stakeholder value
- Improved and innovative processes

Advantages of TQM:

Implementation of TQM in various industries and organizations irrespective of their size, sophistication, area and scale of production they had the following advantages,

- Lowered costs
- Improved Reputation
- Improved competitiveness. quality is profitable
- Better profitability, better returns reduction in operating cost
- Improved cost effectiveness ,reduce unit cost
- Reduction of rejection ,scrap and wastage-reworking
- Better control on process
- Successful new product launch

Literature Review:

Vinod Kumar, Franck Choisine, Uma Kumar, in their paper “Impact of TQM on company's performance”, [1] investigated the impact of total quality management (TQM) implementation on different dimensions of company performance with Canadian finalists for Business Excellence. The different dimensions evaluated for company performance are, employee relations (improved employee participation and morale), operating procedures (improved products and services quality, process and productivity, and reduced errors/defects), customer satisfaction (reduced number of customer complaints), and financial results (increased profitability). Further they observed sample size is a limiting factor for statistical analysis, also the results are valid for TQM adopters only. In addition the study provides useful insights into the performance improvement that can be achieved, how different dimensions of performance are affected by TQM and gives insights into how long does it take to obtain these benefits.

A journal paper by Deepak subedi and Suneel maheshwari titled, “Impact of total quality management (TQM) on profitability and efficiency of Baldrige award winners”, [2] concluded that increase in earnings and sales growth of Baldrige Award winners is more than that of the control group, indicating that total quality management can have positive impact on the bottom line. The results also indicate that lean inventory and quality management go hand in hand. However, with total quality management, firms may or may not gain advantage in cost or in ability for premium pricing.

Saif Ullah Qureshi, Sidra Sharif, (2012) in their article “Impact of TQM Practices on Firm's Performance of Pakistan's Manufacturing Organizations” [3], examined the association between total quality management (TQM) practices and performance, i.e. quality, business, and organizational performance. Their conclusions are that TQM practices positively impact the performance of organization. They identified TQM tools and techniques (Incentive and Recognition System, Process, Monitoring and Control and Continuous Improvement) and Behavioral factors (Fact) Based-management, top management's commitment to quality, employee involvement and Customer focus) contribute to the successful implementation of TQM. The main implication of the findings for managers is that with TQM practices, manufacturing organizations are more likely to achieve better performance in Customer satisfaction, employee relations, quality and business performance than without TQM practices.

Researches Beshkol, Sajad; Rahimi, Fateme (2012) [4] in their paper, “Total Quality Management; a New Approach to the Business Operation Improvement”, identified organizations need operation improvement and this has to be taken care by the managers as it is the fundamental responsibility to improve the operation. They believe that the Performance management systems are a cornerstone of human resource management (HRM) practices and are the basis for developing a systems approach to organization management. Systems of controlling and evaluating the operation provide mechanism for arranging companies' strategies and activities implementation and it is considered that both quantitative and qualitative criteria's can guaranty the success in measurement. Total quality management (TQM) is not only a culture and philosophy, but also a guidance outline for the basis of permanent development. Implementing such strategies guide the organizations in a way that enable them to have the best operation on the controllable factors.

It can be understood from the research studies made by different authors that TQM is definitely having a positive impact on the performance of any organization along with reduction in costs. Looking into the present market trend, is forcing the industry to strive for the excellence and to survive in the competition adoption of such technique is a must. The author also identified that the technique can be put into practice by small scale industry also in order to reap the benefits of TQM.

Research problem identified:

The author has identified a broader area of research work which can be taken up for research study. The problem identified is, an overview of TQM concepts and its impact on small scale industry. As there is no much research work done in this area the survey will definitely help the small scale sector and allow the industry to take the benefits of implementing TQM in their organizations. The proposed work should define certain objectives relevant to the organizations selected, and a well structured questionnaire to collect the primary data and suggest a suitable statistical tool to analyze the data. The instigator is expecting a positive hike in quality levels, higher rate of performance both organization and business and reduction of costs with increase in resource utilization, promoting the concept of right at first time and in an overall skill, productivity will increase to greater extent.

Conclusions:

This paper is a survey of quality technique called TQM, in which concepts were discussed in detail right from definition to implementation benefits. The review has given an idea to identify a research problem where certain investigations made can give the proposed industry to have a different perspective and positive approach in terms of TQM and its associated benefits when applied towards the small scale sector.

References

- [1] Vinod Kumar, Franck Choisine, Danuta de Grosbois, Uma Kumar, (2009) "Impact of TQM on company's performance", International Journal of Quality & Reliability Management, Vol. 26 Issn: 1, pp.23 – 37.
- [2] Deepak Subedi, Suneel Maheshwari (2007) "Impact of Total Quality Management (TQM) on profitability and efficiency of Baldrige Award Winners", Delhi Business Review X Vol. 8, No1
- [3] Saif Ullah Qureshi and Sidra Sharif, (2012), "Impact of TQM Practices on Firm's Performance of Pakistan's Manufacturing Organizations", Volume 2, No. 10
- [4] Beshkol, Sajad; Rahimi, Fateme (2012) "Total Quality Management; A New Approach to the Business Operation Improvement", Vol. 6 Issue 12, p177
- [5]. Besterfield, D.H. (1995) Total Quality Management, New Jersey, Prentice Hall Inc.
- [6] Dr A.C Arora Total Quality Management TS16949
- [7] Ben, N., J., Naim, M. M., & Berry, D. (1999), 'Leagility: Integrating the lean and Agile Manufacturing paradigms in the total supply chain - Strategies for enriching', International Journal of Production Economics, vol. 62 no.1- no. 2, pp. 107-118
- [8] Dalton\$ Marius-Dan, "Small and medium enterprise's growth and new technologies Implementation", Romanian Economic and Business Review, Vol.7, no.2, 2011
- [9] Khan Jam shed H (2003), "Impact of total quality management on productivity", The TQM Magazine, Volume 15 Number 6, pp. 374-380
- [10.] Juran, J.M. "Juan's New Quality Roadmap", Free Press, New York, 1988
- [11] Kouzes, J.M., Pozner, B.Z. (1990), "The credibility factor: what followers expect from their leaders", Business Credit, Vol. 92 No.5, pp.24-8.
- [12] Asher J.M (1992) implementing TQM in small and medium sized companies (Hertfordshire, technical communication)
- [13] Berry, T.H (1991) managing the Total quality transformation (New York, McGraw-hill)
- [14] Dr. Masood ul Hassan, Aamna Mukhtar Saif Ullah Qureshi Sidra Sharif(2011) "Impact of TQM Practices on Firm's Performance of Pakistan's Manufacturing Organizations" have carried the same theme of 'Quality Competitiveness and Performance' at Pakistan's 12th International Convention on Quality Improvement
- [15] M. Waqas Raja, Dr. Mahmood Ahmad Bodla, Dr. Shahab Alam Malik (2011) "Evaluating the Effect of Total Quality Management Practices on Business Performance: A Study of Manufacturing Firms of Pakistan" International Journal of Business and Social Science Vol. 2 No. 9
- [16] Maria Leticia Santos,Vijande, (2007) "TQM and firms performance: An EFQM excellence model research based survey" Int. Journal of Business Science and Applied Management, Volume 2
- [17] Musran Munizu (2013) "The Impact of Total Quality Management Practices towards Competitive Advantage and Organizational Performance: Case of Fishery Industry in South Sulawesi Province of Indonesia" Pakistan Journal of Commerce and Social Sciences, Volume 7.