A REVIEW ON THE CLASSIFICATION OF TOTAL QUALITY MANAGEMENT

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ABSTRACT

This paper presents a literature review and classification scheme for Total Quality Management Research. The result shows that an increasing volume of TQM Research has been conducted for a diverse range of areas. The articles have been classified and result of these is presented into four main categories. That comprises of Understanding of TQM, Information Technology and TQM, Global/Country Perspectives and Benchmarking. Analysis of the selected research articles is carried out and gaps in the research are identified. A comprehensive list of references is presented. This review is intended to provide thrust in research and help simulate further interest.

KEYWORDS: Total Quality Management, Benchmarking, Quality, Performance & Information Technology

INTRODUCTION

Stiff competition in the Global market has prioritized Quality as a key management concern for most of the organizations across the world. To improve the efficiency of any organization, implementation of TQM plays a major role. In order to enhance the performance of any firm with respect to Quality, customer satisfaction, productivity and profitability, TQM’s systematic approach of quality improvement is a must for empowering each and every member of the organization. TQM is the best management philosophy ever utilized. Its purpose surrounds continuous long term and a sustainable improvement both in quality and productivity. Along with the basic functions of an organization that is improvement of quality and productivity, TQM plays an important role in eradicating the fear of change among employees. It is well said that --- “Prevention is better than cure.” This philosophy is focus of the major principles of TQM which states that cost of correction is far more than cost of prevention. Globalization and Economic liberalization have made high dynamic change in national and international competitive environment. Enhanced demand in the organizational competitiveness is an outcome of this dynamic change. This change has shifted focus towards the customers and how to retain and increase their satisfaction. TQM is considered to be the best philosophy in management for any organization. Placing the customer value and their needs on the top is what TQM seeks to do. TQM is a valuable tool to develop strategic info maps and info charts. Infomaps and Infocharts are used as models and templates for planning a route which would help create inter organizational data base which provides area wise knowledge database and user can generate the query report. TQM is defined as a systematic philosophy of management which emphasizes on continuous improvement in each and every function of an organization, right from acquiring resources to providing service to the customer. In order to improve the performance in every organization TQM is the best practice taken up by any organization.

TQM goes beyond the production quality approach and it encourages employee involvement in the
organization, and includes function like administration, communication, manufacturing, marketing, distribution, planning and training etc.

Qimtek.co.uk (2017), the issues that plagued was related to poor delivery, quality and ROI. It was then that BS5750 was implemented by Dutton Engineering in 1984 as a response to this issue, although it failed to measure up to its expectation. In 1984, the launching of the principles of Quality improvement program of the organization by one of their customers through their supplier, that Dutton applied TQM.

Table 1

<table>
<thead>
<tr>
<th>Given By</th>
<th>TQM Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>British Standards Institution standard BS 7850:1:1992</td>
<td>A philosophy based on management which seeks to integrate human resource with material resources of an organization to achieve the organizational objective in an effective and efficient manner.</td>
</tr>
<tr>
<td>International Organization for Standardization standard ISO 8402: 1994</td>
<td>It's a combination of teamwork, involvement of all its stakeholders with the aim of achieving the highest goal of both customer satisfaction, organizational success and above all the growth and development of the society on a long term basis.</td>
</tr>
<tr>
<td>The Chartered Quality Institute</td>
<td>It is a philosophy which aims at getting the best, achieving the organization goal while still adhering to the basic human values of ethics and principles.</td>
</tr>
<tr>
<td>American Society for Quality Control (ASQC)</td>
<td>(TQM) is a strategy seeking customer satisfaction through number of ways and means like enhancing the various processes involved, the final product, the service associated with it including the work culture of the organization concerned it includes not only customers but also every single person associated with the organizational goal and this means its employees as well. Quality gurus such as Philip B. Crosby, W. Edwards Deming, Armand V. Feigenbaum, Kaoru Ishikawa, and J.M. Juran helped to develop the framework of the tool for its effective implementation for organizational success.</td>
</tr>
<tr>
<td>Researchers</td>
<td></td>
</tr>
<tr>
<td>Duane, Hokisson, Hitt, (2009)</td>
<td>TQM encompasses number of factors like making advances in developing techniques for problem solving, helping companies achieve economy, boost teamwork, promote a discerning customer base which helps identify between good and bad, reach deadlines and coming up with new products from time to time.</td>
</tr>
<tr>
<td>Flynn, Schreeder and Sakakibara (1994)</td>
<td>TQM seeks to create products and services with high standards of quality, taking into account the customer’s needs, their expectations, and build a strong foundation based on customer support.</td>
</tr>
<tr>
<td>Ho and Fung (1994)</td>
<td>TQM is a way to increase the competition, make the organization flexible and increase the efficiency of the organizations while curbing unnecessary expenditure and monitoring employees for whole hearted participation for improving the process.</td>
</tr>
<tr>
<td>Suhanshu Bala Singh and R. S. Dhala, (2011)</td>
<td>TQM is an umbrella term which means the whole of the organization is involved in the process of achieving organizational success like getting customer satisfaction, reducing unnecessary expenditure of resources, increasing the level of service.</td>
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(En.wikipedia.org, 2017), (Anon, 2017), (Qimtek.co.uk, 2017), (Gharleghi, 2017),

Classification of Literature on TQM

The classification framework shown in Figure 1 is based on the review of the literature and the nature of TQM Research which is meant to provide an understanding how the subject has evolved and its progress till date. As TQM is a new concept the first and foremost important thing is to have clarity of its definition. There are several researchers who have defined TQM in different ways and in different perspectives. Further wide spread presentation of TQM requires resolving vital quality issues. However, attempts of TQM implementation at the local level are not so visible as compared
to the international level. In the International level countries like US, Japan, European countries and even a few other developing countries have shown inclination towards implementation of TQM. There is a huge amount of investment in the implementation of TQM. Hence, it needs to be benchmarked in terms of return; it would give to the organization.

![Diagram of TQM](image)

**Figure 1**

***TQM implementation in India --- needs to be added in the Global/ Country perspective box***

**Understanding TQM**

**Evolution of TQM**

TQM is an endless journey for a company. It dates back on May 16, 1924, when Walter A. Shewhart of Bell Laboratories used start to improve the quality of telephone. It could probably first of its kind of control chart. It was Shewhart who came up with the ideas on how to enhance quality of telephones. There were around 40,000 people involved in the process of making telephone equipment at Hawthorne’s Electronics, with around 5,200 people working in the inspection department. Shewhart conducted classes in statistical methods at Hawthorne at various other plants. Soon western Electronic came out with a book on methods of quality control and that was considered the ultimate in industrial quality control. It is responsible for improving quality in both the services and manufacturing sectors and imparting and improving the quality of life.
HOLUSHA, (1993), during the post World War-II scenario, in 1950 Dr W. Edward Deming introduced quality revolution to Japanese senior officers. Rising from the ashes of World War –II, it was observed that many Japanese companies came up with innovative ways and means to achieve quality.

Deming was more of a philosopher who felt that TQM is responsible for improving quality in both the services and manufacturing sectors and improving people’s quality of lives. Deming’s method believed in dynamism and change. And two important points explained by Deming were consistency of purpose – “it’s you who would identify what business you are associated with it and how you can excel in it” and continual improvements – “Instead of complacency, continuous improvement is more needed in quality otherwise that would lead the Organization to stagnation”. According to Deming there were two ways of Process Improvement: 1. The first way of process improvement was the change of the common causes that was systemic and 2. The other way concerned with eliminating the “special causes which produce non random variation within systems. Deming recommended a statistical process control to differentiate between Systemic and special causes and this resulted in quality improvement as a whole. Deming’s definition of quality is the lesser the variation better the improvement in quality.

Juran(2009) defines Quality in terms of its usability. Juran developed a holistic approach which covered the entire life span of a product right from design, process development, customer relation and field service.

After that Kaizen was implemented in industries all over Japan. “Kaizen” is a fundamental concept of quality management and is an important part of both TQM and ‘lean manufacturing’. Kaizen exists rather than being imposed.

During 1970s, the business tycoons of America were compelled to follow the Japanese, especially in automobile and electronics sectors. Japan emerged as a market leader by spreading the market share of America by offering superior quality products at affordable prices. This created an economic crisis among US Industry and this enforced the U.S. corporations to be a part of the quality movement.

Quality in Japan

The 1940’s saw Japanese products being dubbed as poor invitations and cheap. But, industry experts were quick to realize this issue and decided to come up with new and superior quality products. They decided to take advice from quality experts such as Deming, Juran and Feigenbaum to produce high quality products.

Deming was of the opinion that they could achieve it in 5 years time, but many Japanese were skeptical about it. But, they implemented his advice. Perhaps the Japanese felt it would be indecent not to believe in Deming’s views or may be it could embarrass him not to follow his suggestions. The reason could be many but finally they took the advice of all the experts and moved ahead.

During the 1950’s, the two concepts of quality control and management surged ahead very fast and were the buzz words in Japanese management circles. The concept of quality did not limit itself to management level only. The concept of quality circles emerged in 19060’s. By definition quality circles means a group of workers who volunteer to meet and take up for discussion issues pertaining to improving workplace, and presenting their ideas to the management through presentations.

A corollary to the quality circles was employee motivation. This made the employees felt they got noticed for their performance. Another consequence of the quality circle was improving not just the quality of products but improving
each and every feature of the organization. This was the stepping stone towards the concept of total quality.

**Total Quality**

The word was viewed in an article penned by Feigenbaum presented at an International conference on quality control in 1969 in Tokyo. It was an umbrella term covering a wide gamut of issues in an organization.

**Total Quality Management**

The 80’s and 90’s witnessed a new and distinct period in quality control and management. This later evolved as Total Quality Management (TQM). The success of Japanese companies after implementing quality theme, now U.S companies started implementing their own versions of quality management. TQM which covered a wide range of quality centered steps, programmes and procedures, occupied centre stage in the Western worlds quality movement. TQM is typically defined as: customer focus, the involvement of all employees, continuous improvement and integration of quality management into the total organization. The many definition that were propounded meant the same, yet there was not much clarity regarding such concepts as what kind of practices, policies and activities were required to execute to fit the TQM definition.

The year 1988 marks a historic period for Quality Management with the instituting of the Malcolm Baldrige award in the United State. As a reaction to this model the European Foundation of Quality Management in 1992 came up with a similar model. EFQM of European Model is the basis for European Quality Award.

As companies vie for winning awards, the objective of instituting such awards was to motivate organizations to adopt more and more principles of quality management. Now a day’s Business Excellence model are introduced with more clear quality approaches. The new era has seen a large number of organizations both big and small opting for TQM or Business Excellence. Realizing the need for support meant for the development of this aspect, the centre for organizational Excellence Research instituted BPIR.com in April 2002.

During late 1970s and 80s, Crosby came out, with influential concepts such as “Quality is Free” and “Zero Defects”. As per Crossby judgment, companies were able to reduce their costs to a minimum of 2.5% from a huge 15 to 20 percent if they took the appropriate measurers right from the beginning. This included prevention and appraisal activities which companies resorted to maintain their standards of excellence. (En.wikipedia.org, 2017)

**Ishikawa (1985)**, states that TQM should be a combined effort of all concerned in the organization from the top to the rest of the employees. He stressed that to implement quality control, one must design, develop, produce and provide a quality product which is available within a budget is useful and satisfies the customer as well has a satisfying after sale service also.

A broad review of literature of TQM recommends that TQM covers a wide range of different topics and its viewpoints. In the area of execution of TQM, there are three widespread suggested base articles written by Saraph et al. (1989), Flynn et al. (1994), and A hire et al. (1996), respectively. Ahire et al. (1996) imposed that for future research on TQM it is essential to undertake a combination of the three frameworks. The frameworks are Saraph et al. Role of divisional top management and quality policy, Role of quality department, Training, Product/service design, Supplier quality management, Process management/ operating, Quality data and reporting, Employee relations/Asserting, Flynn et al. framework Quality leadership, Quality improvement rewards, Process control, Feedback, Cleanliness and organization,
New product quality, Interfunctional design process, Selection for teamwork potential, Teamwork, Supplier relationship, Customer involvement, and Ahire et al. framework Top management commitment, Customer focus, Supplier quality management, Design quality management, Benchmarking SPC usage, internal quality information usage, employee empowerment, employee involvement, employee training, product quality, supplier performance.

Source: [http://shodhganga.inflibnet.ac.in](http://shodhganga.inflibnet.ac.in)

The current research followed this proposal which attempted to incorporate their TQM forms as far as possible.

“TQM is a management belief for constantly improving total business performance through on leadership, supplier quality management, vision and plan statement, evaluation process control and improvement, product design, quality system improvement, participation of employee, reward and recognition, training and education, and customer focus”.

**Total Quality Management Characteristics**

The key characteristics given priority in the implementation of TQM are focus customer, uninterrupted process, error-free approach, involvement of employee, recognition and rewards, synergy in teamwork and modus operandi.

**TQM Application**

**Table 2**

<table>
<thead>
<tr>
<th>TQM dimensions</th>
<th>TQM Principal facets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key role of Top management</td>
<td>Proper implementation of TQM depends mostly on the dedication of the Top management. Top management has to play the major role of a leader for motivating the workforce.</td>
</tr>
<tr>
<td>Relationship with customers</td>
<td>The first priority of the work force should be the satisfaction of the customers and consumers needs.</td>
</tr>
<tr>
<td>Relationship with the Supplier</td>
<td>While selecting suppliers, standard of the product need to be given more worth compared to price</td>
</tr>
<tr>
<td>Management of Workforce</td>
<td>Providing training, empowering the workers and having team work plays an important role in guiding the workforce management.</td>
</tr>
<tr>
<td>Design process of the Product</td>
<td>All units need to be involved in the designing of the process and perform unitedly to achieve a design</td>
</tr>
<tr>
<td>Flow of Process management</td>
<td>Housekeeping has to be maintained as per the 5S concept. Appropriate instruments need to measure the improvement of both statistically and non statistically. There should be the presence of Zero-defect process.</td>
</tr>
<tr>
<td>Quality data and reporting</td>
<td>Authentic information must be easily available and the information should be a part of the visible management system. Records consisting of scrap, repetition of work, and price of materials about quality indicators should to be maintained.</td>
</tr>
</tbody>
</table>

**Source:** Practical Applications of Total Quality Management (TQM) – Part I (July 10 2010) http://nkoyock.net/blog/?p=52

TQM resulted from the implementations that were made in manufacturing companies like IBM, Toyota and Motorola. Service companies like Lands’ End, Federal Express, Disney, Avis and Ritz Carlton Hotels have taken the initiative in creating a well-designed quality management program that comprises of performance, courtesy, and training of
Efficiency and Effectiveness

Elsiddig (2011). Efficiency was defined by business dictionary as "Generating the maximum amount of profit margin while working on a budget with less effort". AbulrahmanTawfiq defined “Efficiency of the firm depend upon the optimal utilization of an organization’s existing resources which includes its finance, instruments, ingredients and workforce with the idea of moving in a planned manner.

Effectiveness is based on a firm’s objectives and its results, therefore it can be interpreted as follows:“Effectiveness is the ratio of the actual output to the expected one as per below formula”

Efficiency = (Used Resources / Planned Resources) / X100

TQM Policy

A quality policy may be interpreted as a set of principles established by the management and experts on quality to explain the aim of quality/standards of a firm which is about actual quality or standards and the rules put in place to implement them as per the policy of the management across department. Quality policy management is considered as a long term strategy of an organization.

An organization’s policy on quality is a well documented piece of written information which seeks to be communicated and made understood to one and all in the organization. Section 5.3 very clearly states the reasons for implementing quality policy.

Section 5.3 of the ISO 9001 Standard Requirement

<table>
<thead>
<tr>
<th>S No.</th>
<th>The Quality Policy to be ensure by Top management :</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td><em>is keeping with the objectives, mission, and vision of the organization</em></td>
</tr>
<tr>
<td>02</td>
<td><em>Promising to conform to these standards and constantly enhance the quality management system for better effectiveness</em></td>
</tr>
<tr>
<td>03</td>
<td><em>Giving a structure for implementing quality objectives.</em></td>
</tr>
</tbody>
</table>


## LITERATURE REVIEW DETAILS

### Table 4

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Title of the Paper</th>
<th>Name of the Author(s)</th>
<th>Year of Publication</th>
<th>Objective</th>
<th>Research Methodology</th>
<th>Findings</th>
<th>Limitations</th>
<th>Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tool quality management and service quality: an implementation study of QFD practices and customer business in service industries</td>
<td>P. Talal et al.</td>
<td>2018</td>
<td>To identify and test the QFD practices that support service quality and design activities and to evaluate the effectiveness of QFD implementation in order to solve examples of service industry issues.</td>
<td>A literature review</td>
<td>The literature review 17 major QFD practices were found to be critical for the industry performance. These factors were identified and recommended for improvement to the service industry. An analysis of 15 major service issues was also conducted.</td>
<td>Not applicable</td>
<td>Further detailed investigation is needed to analyze the implementation between QFD practices and customer business in service industries.</td>
</tr>
<tr>
<td>2</td>
<td>An empirical study of QFD practices in Indian ICT and Banking Industries</td>
<td>P. Talal, D. Behera</td>
<td>2019</td>
<td>To identify and test the QFD practices in Indian ICT and Banking Industries</td>
<td>A literature review &amp; case study analysis</td>
<td>The results show that QFD practices are effective in improving service quality, enhancing customer satisfaction, and increasing overall business performance.</td>
<td>Not applicable</td>
<td>Further detailed investigation is needed to analyze the implementation between QFD practices and customer business in service industries.</td>
</tr>
<tr>
<td>3</td>
<td>Implementation Of TQM (Total Quality Management) In Different Organizational Departments</td>
<td>N. S. Behera, A. R. Das</td>
<td>2020</td>
<td>To understand the implementation of TQM in different organizations and to analyze the effectiveness of TQM in improving organizational performance.</td>
<td>A literature review &amp; case study analysis</td>
<td>The study finds that TQM practices are effective in improving organizational performance and enhancing customer satisfaction.</td>
<td>Not applicable</td>
<td>Further detailed investigation is needed to analyze the implementation between TQM practices and customer business in service industries.</td>
</tr>
<tr>
<td>4</td>
<td>The impact of human resources and Total Quality Management on the enterprise</td>
<td>A. R. Das, N. S. Behera</td>
<td>2021</td>
<td>To assess the impact of human resources and TQM on enterprise performance</td>
<td>A literature review &amp; case study analysis</td>
<td>The study finds that human resources and TQM have a significant impact on enterprise performance.</td>
<td>Not applicable</td>
<td>Further detailed investigation is needed to analyze the impact of human resources and TQM on enterprise performance.</td>
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<td>5</td>
<td>Impact of TQM on production productivity and Quality (A case study of General Motors)</td>
<td>P. Talal, D. Behera</td>
<td>2019</td>
<td>To assess the impact of TQM on production productivity and Quality</td>
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<td>The study finds that TQM practices are effective in improving production productivity and Quality.</td>
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<td>The impact of TQM practices on product quality in Indian manufacturing sector</td>
<td>P. Talal, D. Behera</td>
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**Impact Factor (JCC):** 6.9876  
**NAAS Rating:** 3.43
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<th>Year</th>
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<td>2003</td>
<td>Young</td>
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<td>Identified 10 categories of TQM practices</td>
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The findings presented in this paper suggest that the service provider should consider implementing TQM practices similar to the ones identified in the literature review.

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21

Table 1: The Classification of Total Quality Management (continued)

<table>
<thead>
<tr>
<th>Year</th>
<th>Author(s)</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>Lee</td>
<td>Literature review</td>
<td>Identified 7 categories of TQM practices</td>
</tr>
</tbody>
</table>

The classification presented in this paper provides a framework for understanding the different types of TQM practices that can be implemented in various service industries.

22

Table 1: The Classification of Total Quality Management (continued)

<table>
<thead>
<tr>
<th>Year</th>
<th>Author(s)</th>
<th>Methodology</th>
<th>Results</th>
</tr>
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<tbody>
<tr>
<td>2007</td>
<td>Kim</td>
<td>Literature review</td>
<td>Identified 5 categories of TQM practices</td>
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</table>

The classification presented in this paper provides a framework for understanding the different types of TQM practices that can be implemented in various service industries.

23

Table 1: The Classification of Total Quality Management (continued)

<table>
<thead>
<tr>
<th>Year</th>
<th>Author(s)</th>
<th>Methodology</th>
<th>Results</th>
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</thead>
<tbody>
<tr>
<td>2003</td>
<td>Kim</td>
<td>Literature review</td>
<td>Identified 10 categories of TQM practices</td>
</tr>
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</table>

The findings presented in this paper suggest that the service provider should consider implementing TQM practices similar to the ones identified in the literature review.
Literature on Understanding TQM

Technological Issues

TQM and its application in IT in many organizations have been practiced successfully. Various firms are able to supply good quality products and services due to use of IT in TQM.

The sustenance of the firms depends on overcoming these challenges posed by stiff competition. Technology acts as a catalyst in creating gainful employment and giving job satisfaction.

S.L. Ahire(1996), D.Y. Golhar and Waller M A(1996), F. Vouzas and A.G. Psyhogois, & F.W. Dewhurst, A.R. Martinez-Lorentz and C. Sánchez-Rodríguez gave nine main aspects of TQM described in TQM-IT literature, it is as follows; Involvement of the entire workforce, constant process improvement, regular training, joint efforts of organization’s workforce, empowerment, commitment and support from top-management, culture change, flat organization and Customer satisfaction.

TQM is the basic belief in management which uses certain basic values like expanding business, maximizing profits, improving productivity, while doing away with rework, reducing waste, rejects, customer dissatisfaction and unnecessary expenditure (Deming, 1986). Witcher(1990), defined TQM as a combination of three terms i.e Total, Quality and Management. Total: involvement of each and every member including customer and suppliers. Quality: requirements of customers need to be given priority Management: commitment of top level management

Sashkin and Kiser (1993) define TQM as a firm’s culture which encourages satisfaction of customers by integrating the three aspects like techniques, tools and training.

Michael et al (2009) explained TQM as a set of beliefs that a firm adheres to in its pursuit of achieving quality, setting parameters of quality and constantly improving the level of quality based on satisfaction level of customers from the services. It is a belief that seeks the involvement of each and every single individual of the workforce to contribute their efforts to enhance every single procedure of the firm.

The link between the use of IT and an organization’s performance has always been of vital importance in any industry. Rogers et al. (1996), Pearson et al. and Matta et al. Ang et al. created an instrument to quantify the utility of IT in TQM which helps in measuring the values of IT in TQM and how IT supports this system. Mjema (1995) affirmed that IT has played a major role regarding awareness of quality, quality improvement as well as reducing expenditure of the organization.

Tools in Process Improvement

Joseph Juran(2008) explains quality management as the “Quality Trilogy”: that comprises of Planning, control and improvement.
Literature review on IT & TQM Tools

Table 5

<table>
<thead>
<tr>
<th>Authors</th>
<th>Journal Title</th>
<th>Focus</th>
<th>Tools &amp; Techniques</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dewhurst et al. (1999)</td>
<td>Quality and Reliability Management</td>
<td>The review of literature of this paper primarily focuses on the link between IT &amp; TQM</td>
<td>Ten dimensions of TQM</td>
</tr>
<tr>
<td>Au and Choi (1999)</td>
<td>Information and Management</td>
<td>An empirical investigation by the author explain the importance of IT in improving the TQM process</td>
<td>Entity diagram, data flow diagram, Pareto chart, control chart</td>
</tr>
<tr>
<td>Raviehanevan and Rai (2000)</td>
<td>Journal of Management Information System</td>
<td>For identifying and explaining the IT properties of quality management and quality performances the quality and system development were developed</td>
<td>LISERL, framework, statistical analysis, ANOVA, cluster analysis</td>
</tr>
<tr>
<td>Palvia et al. (2001)</td>
<td>Industrial Management and Data System</td>
<td>The quality of IT to be determined was suggested as a socio-technical approach in the article.</td>
<td>SDLC, ANOVA, retest, pilot Test</td>
</tr>
<tr>
<td>Ali et al. (2010)</td>
<td>Total Quality Management</td>
<td>The research findings related to factor analysis of the 8th point in TQM dimension</td>
<td>SPSS, SERVQUAL model</td>
</tr>
<tr>
<td>Tiwari and Chaudhari (2012)</td>
<td>World Journal of Science and Technology</td>
<td>Both IT &amp; TQM have are greatly impacted organizations and both have been significantly researched.</td>
<td>Eight dimensions, TQM</td>
</tr>
</tbody>
</table>

Global/ Country Prospective

Total Quality Management has been getting worldwide approval and every firm is trying to adopt and practice it. Although Dale and Lightburn have remarked that certain firms are still unwilling to implement TQM. There is a disagreement that there are a large number of organization who are using this new concept of quality management in various aspects of their business but in a superficial manner. The main reasons behind this condition is unwillingness on the part of the top management regarding enforcing TQM and quality enhancement combined with poor leadership and apathy towards any improvement.

A survey accepted by Singh to evaluate the position of TQM in India from which he discovered that among 1000, only 39 companies were surveyed and are practicing Total Quality Management to a few extent. However, he reached the conclusion that these firms are not able to differentiate between quality control and TQM.

It was Masaki Imai who ushered in Kaizen through his book of the same name. The reason behind the competitive success in Japanese organization is this 1986 Kaizen theory, which means improvement on a continuous basis based on principles like: good process good result, things based on data and facts, team work and implementation of Kaizen. The main feature of Kaizen is minute changes together lead to great consequences. Kaizen means everybody’s improvement. Kai means Change Zen means good. Together they mean change for better.

It is Dr W. Edwards Deming who is responsible for bringing in this concept in Japan after World War II for which he was awarded by Hirohito. It is his book “Out of Crisis” where the principles are: consistency of purpose leads to improvement, opportunities, sustenance and job creation, new philosophy adoption, putting quality first and eliminating inspection, minimizing cost instead of hiking price, improve quality and decrease cost, providing training, leadership, providing a fearless work culture, barrier free departments, improving level of productivity, enhancing pride of workmanship of managers and engineers, encouraging education and self improvement.
In Western philosophy Kaizen means assess, plan, implement and evaluate. The Kaizen Blitz means planned effort for quick and short term goal.

**Total Quality Management in Japan**

The term “Made in Japan” meant inferior quality goods in the 1950’s. Today Japanese are famous for its technology, ingenuity and quality, which are highly appreciated by people across the globe. It is possible only because of the adaptation of TQM in every sphere of life. 1949 saw the emergence of quality control in Japan and a group was formed- The Union of Japanese scientist and engineers for educating and supporting quality control in Japanese firms. In Japan SQC rose to prominence in 1946 and continued to 1950. Although statistical control technique and quality control education program were established yet the top management was unwilling to practice quality control activities.

This underwent grate changes in 1954, when Dr J.M. Juran delivered a talk on “Planning and Practice in Quality Control”. The period between 1955 and 1960 was chosen as the “Years of TQC”. In these years, quality control activities got wide spread support from all concerned and programs of quality control across companies. Some of the main points for participating quality control programs in Japan across companies were due to training and education, formal implementation of quality, establishing in formal quality control groups appreciation and awards and having patience were some of the measures as per Ishikawa.

**TQM in the USA**

Many organizations in the U.S are facing a crisis today. The predomination of U.S in market both globally and in America has changed over a period of time. Juran realized this change in the beginning of 1960s and a perceived threat from Japanese organizations. Drucker too noticed the Japanese approach to management of operation and their success. But it was not until 1970’s that American management faced threats from Japanese firms.

This knowledge regarding quality management and quality control are responsible for a buoyant economy of Japan, which ultimately showed the path to American Business on how to exercise quality control and the empirical techniques as propagated by Deming, Feigenbaum, Crosby, Juran and Deming and Geoffrey.

This was endorsed by Hayes, who certified the advantages of the different aspects like regular maintenance of equipment to prevent failure, optimum capacity of products and “thinking quality” in an item. Wheelwright stressed on quality of a product as its strength. The way the Japanese benefitted by incorporating a strategic operation policy that emphasize on quality. Garvin also stated that stress on quality as an added feature, if U.S firms wanted to recover their losses of their shares and gain better profits. These ideas led to certain changes in the theoretical aspects for a more clear approach to quality management.

The Japanese model of quality management and its implementation have been often repeated in this review of literature. But a study carried out by Modarress and Ansari disclose that many conventional American Firms do not implement quality management in a full-fledged manner.

The brand new quality management method is in many ways.

As per the literature, the main reason behind the success of Japanese is the systematic and regular practice of quality tools at all stages of work by the entire workforce and always. American organizations today are initiating these ideas from their counter parts which they had sold to the Japanese in the early days of 1950.
Lakhe, R., & Mohanty, R. (1994) A research conducted by Modarress and Ansari it was discovered that out of 285 U.S manufacturing unit. Many units were still at the nascent stage of quality control practice. Techniques of Quality control have been greatly used in manufacturing units but not so much in design and engineering, research and development and various other fields. Another study carried out by Embrahimpour and Withers, revealed that both Japanese and non-traditional American companies have high level of employee involvement and use of basic SQC tools. The primary reason behind the failure of quality practices in American companies is apathy of top management towards, implementation of quality management approaches.

TQM in Europe

Lakhe, R., & Mohanty, R. (1994) some of the European countries like United Kingdom, Germany, France and Italy that have shown keen interest in practicing TQM. However, a survey conducted by Lascelles and Dale in the UK on automotive industries revealed that firms with conventional ideas were reluctant to practice quality management. But today the awareness in Europe regarding TQM applications has boosted the importance of this concept and its practice. The focus now is on process in quality improvement, training related to quality and the firm’s message to the world practicing quality. Conventional approaches to quality have now been side stepped by European firms and new techniques have been implemented such as BS 5750 and ISO 9000. This is demonstrated by firms in a number of ways like equal treatment of employees, better investments and a system of reward for good performance.

TQM in Developing Nations

Lakhe, R., & Mohanty, R. (1994) The developing nations have now degraded the quality of their products due to financial crunch in their country, politically apathy, illiteracy, lack of training and with no commitment from the work force. Surveys conducted revealed that many companies did not understand the concept of quality management. It was often considered an option unfortunately; many firms especially in developing nations are far removed from this concept. Many enterprises in developing nations suffer because of following reasons; absence of work force involvement in quality Enhancement practices, absence of encouragement and interest on the part of top management, considering quality as a option not as, necessity for improvement, misconception or pre conceived notion that quality means extra expenditure, lack of transparency and faith among suppliers, dealers, management and trade unions, absence of organized customers coupled with lack of awareness, political apathy, absence of quality standards and insufficient facilities for conducting test, obsolete technologies, poor education, insufficient funding in research and development and workforce training, negligence of people as far as quality of life is concerned, unnecessary social problems like terrorism, hostility, intolerance etc.

However, with enhanced competition in the form of changes in markets worldwide, alteration in EXIM policies and augmented customer awareness, some methodical initiative related to quality control have been practiced in certain emerging nations. Firms are of the belief that not only their growth but their very survival depends on implementation of quality management.

Awan, M. U., Raouf, A., Ahmad, N., & Sparks, L. (2009), the study was on the pharmaceutical wholesale market in Pakistan which highlights that the Process design (PD) plays a major role in TQM implementation. It was also found that like in other emerging nations the way Top management does not support TQM in pharmaceutical wholesale distribution companies so is it in Pakistan.
TQM in India

The term quality is not a catchphrase, but the lifeline of every business house, service industry, or social life which has undergone immense changes and has evolved over the past couple of years. The concept of quality has created all over the world, across industries and firms about the importance of quality.

The concept though has different meanings for different people. The meaning varies from values, to conformance to, fit for consumption, satisfaction of customers and providing necessities. For instance the monuments like the Taj Mahal, located in Agra, and the Sun Temple at Konark located in Orissa, considered the Seven Wonders of the World are hallmarks of excellence and excellent quality.

The involvement of the Indian enterprises in the race towards Quality has already begun albeit in a slow pace. Ever since the government has initiated the open market policy sand liberalization. Indian companies are sharply fitted against MNC’s in terms of quality product and services. The present scenario proves that Indian companies need latest techniques, approaches and concepts to face the challenges. Industry bodies like the Confederation of India (CII), Federation of Indian Chambers of Commerce and Industry (FICCI), Indian Statistical Institute (ISI), Nasscom, and premier institutes like National Productivity Council (NPC) have allowed a portion of their firms to support formulation and practice of quality education and work as consultants in these matters. The Bureau of Indian standards has made it mandatory to standardize quality as per international standards of quality.

Kapur, S. (2013, January 20) Professor Yoshikazu Tsuda, of Japan was the man behind TQM implementation in Indian manufacturing industry. He was the invited by Confederation of India (CII) to introduce this concept in India and he was deputed to India by Japanese union of scientist and engineers who were advocates of TQM worldwide.

Today, we find that Indian manufacturing and service industries are so successful it is because of the implementation of TQM. For instance the auto-component manufacturing units of India have received the highest number of Deming Award for quality next only to Japan. India is also the recipient of CMM Level 5-certified Software Company award. These awards and recognitions have catapulted India to the top most position in Deming award list (termed as the Nobel Prize in the world of manufacturing) of Japan.
Detailed Review on Global perspective of TQM

Table 6

<table>
<thead>
<tr>
<th>Authors</th>
<th>Title</th>
<th>Findings</th>
<th>Location</th>
</tr>
</thead>
</table>
| Jiju Antony et al. (2002)            | Success factors of TQM implementation in the industry and industry-Hong Kong | • Successful TQM practices in industries in Hong Kong is the result certain factors like commitment of the Top management, the contribution of quality department, training and evaluation, workforce involvement and consistent enhancement.  
  • For better customer satisfaction there should be harmonious relationship with suppliers, product design and service, quality of data and reports and communications. | In and around Hong Kong Business Firms |
| Mile Terziowski and Danny Samson (1999) | The relationship between implementation of TQM practices with organizational performance in various sectors and organization sizes | • TQM focuses on a strong link performance and business operations, workforce relations and satisfaction of customers. | In different sectors      |
| Bisnath Sharma and David Gademe (2001) | Importance and effectiveness of quality management approach     | • ISO 9000 and TQM have been accepted by Australian companies for quality maintenance of both products and services. | Australian Business firms |
| M. Sadiq and Teo Boon Hoong (2003)    | The implementation of the TQM and organizational performance of small and medium companies in Malaysia with or without ISO 9000. | • ISO 9000 & TQM have been accepted by Australian companies for quality maintenance of both products and service.  
  • ISO 9000 positively impacted organizational output. | In the Malaysian business organisations |

Benchmarking & Evaluation

Decision makers are continuously in search of techniques that will help in order to enhance the Quality implementation and one of the most famous tools of recent days is Benchmarking. Though benchmarking is not new to the world, but lately its subscribers have increased, and it also occupies a recognizable place by helping quality upgradation.

Quite often, the benchmarking concept is taken to be a practice of imitating or copying. But in realism this proves to be a concept that supports innovation instead of imitation, as said by Thompson and Cox (1997).

Benchmarking is an ongoing process that is meant for assessing the quality of products, quality of services and its implementation aligned with its rivals acknowledged as per corporate experts.

According to Rohlfer (2004) benchmark has been present that 50 years and has been proved to be a main factor to be a main factor in expediting the success of many organizations in bringing about changes like overall changes in the policies of the firms, enhanced operational functions, Business Process Re-engineering.

Mcgaughey et al., (2005), Yaisn (2002) for many firms benchmarking has been a popularly used tool and universally accepted procedure. It has evolved into a process of TQM for accomplishing performance Kirby (2005). As stated out by Sisson et al., (2003) the term benchmarking has been doing the rounds for a significant number of years, but was not used as a tool for quality improvement till the early years of 1980s, when Xerox came into existence it brought down both financial and competitive strain. As per Sisson et al. 2003, the spread of benchmarking as we now know it as, is closely linked with Xerox in the U.S. of A. This gave birth to the first book on this subject by the firm’s head on benchmarking in 1980 (Camp, 1989).
The literature on management extensively discusses ways by which organizations can analyze their performance and to get ideas from other organizations by realizing the importance of those methods Rohlfer, (2004). Garengo et al., (2005), also stated the literature on benchmarking shows their practice covers a whole range of ideas and extols the various forms and activities, because benchmarking is the outcome of the implementation by a number of firms and therefore a continuous development.

Vermeulen (2003) stated that benchmarking is all about identifying, adapting and understanding the best methods that are implemented both in the company and other firms’ in order to improve performance. Benchmarking is the latest concept in management and has described in various ways.

The definition of benchmarking given by Xerox Corporation Camp (1989) and McGaughey et al (2005) is: Benchmarking is the constant and consistent procedure meant for assessing the products, services and practices and against their strongest rivals or those firms which are regarded as leading players.. Benchmarking is a continuous effort as practices in the industry keep on changing and it helps strengthening the corporate leaders.(Chen,2002).

According to Rohlfer(2004) benchmarking is identified as a continuous process that assess the difference in performance, to help establish ‘best practices’ and also paves the way for bringing changes in order to fill those gaps identified. Benchmarking ensures that the changes made in the quality improvement process moves in the right direction to excel in competition.

According to Zairi and Hutton, Alcoa, AT&T and Kodak are the wonderful examples of Benchmarking as a concept that stems from TQM. There is a strong tie between enhancement and supervision (Wynn-Williams, 2005; CMA, 1998). Benchmarking should be changes consider to reflect the internal changes and the ever evolving competitive scenario McGaughey et al,( 2005)

In organizational development, Benchmarking plays a vital role. Research findings conducted in various fields and a host of research works reinforce the belief that the implementations of TQM in firms are indispensable if a firm wants to succeed. The birth of TQM can be traced to early 1920 when production quality control ideas were taking shape.TQM in the early years took shape in Japan and its components can be found in the works of the Juran (1989,) Deming (1986), Ishikawa (1985) Feigenbaum (1983) and Crosby (1979) and can be associated with the development and dominance of the Japanese automobile industry globally.TQM is all about the culture of an organization which includes the attitude and behavior of a firm where in the intention is to supply quality product or service to their customers for the sole purpose of their satisfaction.

According to Hashmi, (2000)& (2004) TQM is a major theory in management which bring up together all the functions of a firm with the single purpose of gratifying customer needs, aligned with a firms objectives.

According to Harnesk and Abrahamsson (2007), TQM works on opposites. For instance it establishes power vis a vis manipulation, collectivism vis a vis individualism, standardization vis a vis innovative learning. But today, generally, researchers give emphasis to quality management programmes for organizational progress and getting optimum result in this world of competition. As per their findings a successful model of TQM needs to be in place, which means to have a system which is customer oriented, has a set of management policies which provides quality products or services for a long term competitive advantage.

In the 1980s & 1990s, TQM became a revolutionary concept which held in its sway national business
systems. TQM is usually considered a social movement (Hackman and Wageman, 1995). To quote Samir Baidoun, in the year 2003, components like top management of processes, benchmarking, strategy, partnership policy and resource management were considered as initial contributions meant for practicing TQM.

Faiza Sajjad and Dr. Shehla Amjad have recognized 8 basic factors of TQM through different review of literature on role of benchmarking in TQM and its impact on organizations. The factors are: Benchmarking, Commitment from Top management, Quality planning process, Quality information and analysis, Human Resource Development, Assurance of Quality, Focus on customer satisfaction, Public responsibility.

TQM & ISO 9000

In today’s globalized market, where dealings with international customers and suppliers are the custom, it is not sufficient for any business to produce high quality products or services. They must also make sure that they are able to meet the standards and necessities that would create reliability in clients towards your company. This additional demand has enhanced the importance of implementing a management system that is wholly quality oriented and this system is named as Total Quality Management System.

Due to its rising extensive acceptance, ISO 9000 has become one of the vital factors in international trade, almost a necessary element for organizations who are into exporting to the European Union (EU) where consumers mostly ask for the ISO9000 certification Erel & Ghosh (1997).

Presently, the ISO9000 certification has turned up to be the prime unit of measurement and proof of quality globally, and in this regard to implement a quality system, it has become successful in presenting itself as an excellent support system of the same and ISO9000 certification as its standard (Escanciano, 2002). Therefore, in the year 1987, the International Organization for Standardization (ISO) located in Geneva published a synchronized set of standards that would ensure quality, known as ISO9000, and a large number of companies globally have launched the basics of quality management.

The rapid growth of ISO9000 certification as well as total quality management reveals a strong interest in academic literature. However, though the total quality management and ISO9000 do not go against the basic principles, these two areas have been puzzled Martinez-Costa & Martinez-Lorente (2004).

CONCLUSIONS

It is quite common in order to find some perplexity in the literature between the implementation of ISO9000 and TQM as few of the points are common in nature. However, the ISO9000 is a testimony to others that the company follows universal standardization procedures, while TQM is proposed to be a management system that helps in improving quality internally (Martinez-Costa & Martinez-Lorente, 2004). The payback imputable to the standard is that it composes an excellent march towards a TQM system; generating awareness about quality between workers and also producing an excellent climate for its implementation Sun, 2000; Escanciano et al (2001).

REFERENCES


