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An Overview of Total Quality Management: Understanding the Fundamentals in Service Organization

Faisal Talib

Mechanical Engineering Section, University Polytechnic, Faculty of Engineering and Technology, Aligarh Muslim University, Aligarh, India

Correspondence should be addressed to Faisal Talib, ftalib77@yahoo.co.in

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Abstract Recent studies on total quality management (TQM) show that there is sudden shift in the application of TQM from manufacturing to service organization and voluminous studies have been undertaken in it. TQM has taken a strong place in all sectors and emerged out as an approach for process improvement, waste reduction, business optimization and quality performance. Additionally, numerous researchers and academicians have acknowledged the applicability of TQM for sustainable competitive advantage especially for service organizations. In light of this, the purpose of the present study is to understand the concept of TQM as applicable to the service system. It also explores the literature on TQM in service organizations as well as reasons for its failure. Lastly, the study provides systematic guidelines for effective implementation of TQM in the service organizations. The findings of study provide a better understanding of TQM, its practices and present the reasons for growth of service organizations. Results also highlight some major outcomes from the latest studies on TQM in service organizations. Finally, the study proposes a ten step approach for effective implementation of TQM in the service organizations. This study provides a framework for better understanding the fundamentals of TQM in service organizations and seeks an in-depth knowledge of TQM theory to the service managers and practitioners. Some managerial implications and scope for future study are presented at the end.

Keywords *Total Quality Management (TQM), TQM Practices, Service Organization, TQM Failure, Implementation*

1. Introduction

Total quality management (TQM) is a management philosophy that empowers every member of the organization. TQM encourage each individual to participate, contribute and offers to present

suggestions for improvement. It is intended to promote continuous and sustained improvement in quality and performance, and develops an attitude of quality culture (Talib *et al.*, 2012). Its basic principle is that the cost of prevention is less than the cost of correction. TQM address overall organizational performance and recognizes the importance of processes (Seetharaman *et al.*, 2006). For TQM to be successfully adopted by an organization there needs to be a perceived need for change in that organization.

From past few decades, TQM has been extensively discussed in the literature and can be seen as a management philosophy characterized by its principles, practices, and strategies that emphasizes upon continuous improvement in quality, increased involvement of employees, commitment of top management, employee empowerment, teamwork, benchmarking, leadership, rewards and recognitions, feedback and relationship with suppliers (Dean and Bowen, 1994; Rönnbäck and Witell, 2008). Most of the studies on TQM have been undertaken in the manufacturing sector and have later spread to service organizations (Gustafsson *et al.*, 2003; Rönnbäck and Witell, 2008). The growth of service industries has resulted in an increased focus on the implementation of TQM principles in service organizations and in delivering high-quality service to customers (Schneider and White, 2004; Rönnbäck and Witell, 2008).

There are several research studies that examine the impact of TQM on industry performance, business performance, small and medium size enterprises (SMEs) performance and measurement of quality in service organization in addition to a number of research studies that investigate critical success factors (CSFs) of TQM in different service organizations by (Talib and Rahman, 2010a,b; Talib *et al.,* 2010; Talib *et al.,* 2011a,b; Yasin *et al.,* 2004; Lee *et al.,* 2010; Kumar *et al.,* 2011; Ramayah *et al.,* 2011; Hendriks and Singhal, 2001a,b; Eriksson and Hansson, 2003; Gustafsson *et al.,* 2003; Khamalah and Lingaraj, 2003; Yusuf *et al.,* 2007, Jannadi and Al-Saggaf, 2000; Wali *et al.,* 2003; Lewis *et al.,* 2005). These studies are intended to help managers implement TQM principles and practices more effectively by recommending the practices to be adopted in their service organizations so as to improve organizational performance and gain customer satisfaction.

The TQM approach integrates three basic fundamental aspects: commitment, involvement and continuous improvement. Commitment in the sense to take pledge for never ending improvement in quality and services to the customer, involvement means involvement of all the team members in achieving a common goal (i.e. from top to bottom), work as a single unit for better results and think about continuous improvement by looking any error and defects, and eliminating it on spot. TQM addresses the issues of customer satisfaction and guidance on implementing the marketing concept. The 1980's brought about a business process of continuous improvement to satisfy customer's need (Churchill and Paul, 1994). If TQM is to be successful in an organization it must be actively supported by senior management. (Schein, 1991) identified one of the common causes of failure of TQM programs as being a lack of top management commitment. If employees are confident that top management strongly supports a TQM initiative they are more likely to become involved in that organization's TQM efforts. Successful employee empowerment and involvement are essential components of any TQM program. To introduce TQM, an open cooperative culture has to be created by management (Crosby, 1979; Deming, 1986). Employees have to be made to feel that they are responsible for customer satisfaction. They are not going to feel this if they are excluded from the development of visions, strategies, and plans. It is important that they participate in these activities for complete success of TQM implementation.

The scope of the present study comes from the fact that the buzz words 'quality' and 'services' plays a crucial role in the development of country through enhanced gross domestic product (GDP) contribution and employment in the service organizations (Talib and Rahman, 2013; Talib *et al.*, 2011a). With the ever increasing competitive and tough market conditions, service organizations are

concerned about their customer needs and requirements, and to satisfy them. This study therefore, makes an important contribution in gaining the knowledge of TQM and service system concepts, and other related issues of TQM in service organizations.

Due to these facts, the motivation for this study was made. Thus, the purpose of this study is to provide an understanding of the TQM and service system. It also examines the literature on TQM in service organizations with the special emphasis on aim of the study, methodology used and major outcomes. The study also investigates the reasons of TQM failures and proposes a ten-point program for successful implementation of TQM program as recommended by quality experts and practitioners. The focus will be on various service organizations across the world. The research methodology adopted was based on extent literature review. Secondary data is collected through literature review from reputed journals, articles, books, magazines, websites and findings are reported. The next section presents the research objectives of the study.

2. Research Objectives

After critically reviewing the current literature and exploring the need of the present study, the research objectives were framed. The key objectives of the present research are:

- to understand the concept of TQM as applicable to the service system;
- to explore the literature on TQM in service organizations;
- to find out the reasons for TQM failure in service organizations;
- to understand the need of TQM practices for its successful implementation in service organizations;
- to propose guidelines for effective implementation of TQM in the service organizations.

3. Total Quality Management

The concept of quality management (QM) is quite old and originated in Japan after the Second World War in late 1930s. The emphasis was then on improving quality and using quality control tools in the manufacturing sector (Demirbag *et al.,* 2006; Talib *et al.*, 2010). Later, the QM concept moved to USA, UK, and other countries and was applied initially in the manufacturing sector. Since then, the idea of QM has been growing fast. It has now taken shape in a series of international standards in the ISO 9000 series (Sachdeva *et al.*, 2007; Demirbag *et al.,* 2006; Talib *et al.*, 2010). Numerous approaches of QM were suggested in order to help industries improve efficiency and competitiveness through improvement of quality. One of the most popular and often recommended approaches is the philosophy of TQM that seeks to integrate all organizational functions to focus on meeting and surpassing customer's requirements and organizational objectives. Also, TQM delights customers (both externally and internally) by meeting their expectations on a continuous basis as it involves every one with the organization to work for continuous improvement in all products or processes through a problem solving methodology.

TQM is concerned with the integration of all the efforts in the organization towards quality improvement, quality development and quality maintenance to meet full customer satisfaction at all economical levels. TQM enhances quality of work and employer satisfaction through participation and involvement and consequently the image of the organization. It develops participative culture where each employee can directly participate in areas relating to his work and decisions concerning his work. It is organized through quality circles on voluntary basis and quality improvement teams (Yusuf *et al.*, 2007).

As per the research study conducted by (Talib *et al.*, 2012), they found that there are several definitions of TQM given by different authors of quality. An essence of these definitions share many

common elements. First, they share the customer is the centre of attention and driving force in the TQM philosophy. Second, they consider management commitment as an essential component for success of TQM. Last, they consider cultural and organizational changes as necessary conditions for TQM success. To summarize, TQM is a management philosophy that helps organizations to improve their overall performance and effectiveness in achieving quality status at global level (Zhang *et al.*, 2000; Yusof and Aspinwall, 2000, 2001; Arumugam *et al.*, 2008). Further, (Dahlgaard *et al.,* 1998) contended that there is no standard recipe for a good TQM program. For the last two decades, the awareness of TQM has considerably increased and it has now become a well-established field of research for academia (Yusof and Aspinwall, 1999; Arumugam *et al.*, 2008).

Voluminous work has been done and is still being undertaken on different facets of TQM in the service sector. Based on the available literature some selected body of this research is discussed and presented in Table 1. In general these studies suggested that TQM has been widely accepted as a management approach for enhanced performance and occupied a central stage for service organizations regardless of the nature of the business they are in. Further, TQM is a compilation of various processes, systems, committed people, transparent communication and culture for customer satisfaction. TQM is infinitely variable and adaptable. TQM had many parameters to work out its strength. (Talib and Rahman, 2010a) furnished a model called "Components of TQM", as depicted in Figure 1. The model articulates that these quality factors will enhance the organizational performance. Various practices of TQM have been shown such as top-management commitment; customers focus; training and education; continuous improvement and innovation; supplier management; employee involvement; employee encouragement; benchmarking; and quality information and performance whereas the output is shown in terms of improved productivity and quality, on-time delivery, customer satisfaction, service quality, and increased customer loyalty and relations. Management action in planning, implementation and evaluation is very much required according to this model. (Talib and Rahman, 2010a) also provide the most essential components as shown in Figure 1 which require the management attention for improved business performance.

Table 1: TQM Studies on Different Issues in Service Sector

Author(s)	Area/Issue(s)
Singh and Sushil, 2013	TQM Enablers for Airline Performance
Mansour and Jakka, 2013	Relationship between TQM Elements and Employees' Attitude
Talib *et al.*, 2013a	Relationship between TQM and Quality Performance
Yang and Yang, 2012	Integrated Model of TQM
Ooi *et al.*, 2011	Relationship between TQM Practices and Service Quality
Corredor and Goñi, 2011	Relationship between TQM and Firm Performance
Talib *et al.*, 2011b	Relationship between TQM and SCM Practices
Lee *et al.*, 2010	Relationship between TQM and Product Innovation
Zu *et al.*, 2010	Relationship between TQM and Organizational Culture
Antony, 2009	Relationship between Six Sigma and TQM
Bhat and Rajashekhar, 2009	Barriers to TQM Implementation
Mehra and Ranganathan, 2008	Relationship between TQM and Customer Satisfaction
Curkovic and Sroufe, 2007	Total Quality Environmental Management
Lee, 2005	Relationship between Ergonomics and TQM
Svensson, 2005	Relationship between TQM and Leadership

4. Understanding the Service System

Services have been defined in many ways but with no general agreement as to what really constitutes services. (Cowell, 1984) highlights the American Marketing Association's definition of services as: activities, benefits or satisfactions, which are offered for sale, or are provided in connection with the

sale of goods. According to (Stanton, 1986): Services are those separately identified, and essentially intangible, activities that provide want of satisfaction and that are not necessarily tied to the sale of a product or another service. To produce service may or may not require the use of tangible goods. However, when such use is required, there is no transfer of the title to these tangible goods. (Gummerson, 1987) suggested that "Services are something that can be bought and sold but which you cannot drop on your foot". (Kotler, 1993) defines services as any kind of performance that one party can offer to another that is essentially intangible and does not results in the ownership of anything. Thus, through different definitions it is understood that services have four important characteristics; they are intangibility, perishability, inseparability and heterogeneity (Mohanty and Lakhe, 2002). The service system, therefore, is an integration of all these components, involving a large number of white-collar staff working with a purpose to satisfy the varying needs of customers. Figure 2 shows a TQM model for service organization. It is a general model suitable for any service system and is being implemented effectively. Further modification in this model can give improved results and better organization's performance.

Service system exists because it helps client in meeting their own needs, it offers alternatives that are superior to self-service in cost, time and convenience, and it meets a wide variety of psychological and physiological needs.

5. Growth of Service Sector

The growth of service sector is due to the fact that service organizations cover a broad spectrum. Such organizations often interact directly with large number of customers. The multiple varying needs and conflicting priorities of such customers have to be recognized and dealt with. Some of the reasons of growth of service sector are:

- increased mechanization and automation at every level within service organizations;
- increased specialization within the economy has led to greater reliance on specialist service providers;
- advent of new technologies and rapid development of information communication technology (ICT) and computerization;
- change in market environment and customers' life style has created demand for new kind of services;
- improvement in quality of life, entertainment, travel, and hospitality services;
- increased involvement of the government, private and non-government agencies;
- highly labor intensive sector and provides substantial employment (CSO, 2010);
- in developed countries such as USA, UK, Japan, France, Singapore, Germany, China and Australia, service sector shares a major contribution to the economy in terms of GDP (The World Bank Group, 2010);
- the net annual income generated by this sector is steadily increasing from last five years and will further rise in coming years (The World Bank Group, 2010);
- it captures and represent almost all the critical features of customer-perceive quality and the key dimensions of excellence that management may encounter.

6. TQM in Service Organization

The widespread interest in using TQM to improve organizational performance started in the manufacturing sector and later spread to service organizations. TQM is better viewed as a combination of principles, practices and techniques (Dean and Bowen, 1994). To be able to compare industry sectors, organizations and even individuals, the object of comparison must be the practices (Gustafsson *et al.,* 2003). However, it is necessary to understand the unique characteristics of

services for an effective implementation of TQM in a service organization. Common TQM practices/CSFs of service organizations with successful quality programs includes: top-management commitment; customer focus; continuous improvement and innovation; training and education; benchmarking; quality information and performance measurement; employee involvement; employee encouragement; and supplier management (Talib and Rahman, 2010a; Talib *et al.*, 2011c; Sila and Ebrahimpour, 2002; Mahapatra and Khan, 2006; Zhang *et al.*, 2000).

Though the service sector lags behind manufacturing in the adoption of TQM (Yasin *et al.*, 2004; Brah *et al.*, 2000; Huq, 2005) but the increasing importance of the service sector in terms of employment potential and contribution to national income forms a backbone of social and economic development of a country and is emerging as the largest and fastest growing sector in the world economy. It is widely believed that its principles are equally relevant to service organizations as both use facilities as inputs to satisfy customer's needs.

Study conducted by (Talib and Rahman, 2010b) discusses and provides an overview of TQM implementation, its impact on different service industries, investigates the various CSFs and processes of TQM implementation, and its effects on different service industries. Five service sectors were chosen for the study they are: health-care, food supply and distribution, education, banking and information technology sectors. For this purpose extensive literature review was done and a framework for TQM implementation in service system was constructed and proposed for better organization performance.

An empirical study on identification and measurement of critical success factors (CSFs) performed by (Issac *et al.,* 2006) reported some critical dimensions responsible for improvement of quality in software industry, also (Wali *et al.*, 2003) presented an exploratory study and identified 12 different CSFs that are responsible to implementation of TQM in Indian organizations. Similarly, study conducted by (Ueno, 2008) identified 7 features which are most crucial in supporting service quality, these management practices could be seen as the predominant attributes in the promotion of service quality.

Further review of TQM literature in service organization has been summarized and presented in Table 2.

Table 2: Research Studies on TQM in Service Organizations as Reported in the Literature

Authors	Main Purpose of the Study	Approach	Major Findings
Sarathy, 2013	Determining the important factors that influence the TQM practice in real estate industry	Questionnaire survey and AHP methodologies	Employee involvement, top management commitment, employee customer focus, plays very important role for TQM practice in organizations
Sahu *et al.*, 2013	Identification of critical factors of TQM, for use in a framework that addresses sustainable quality improvements in technical institutes	Literature survey and content analysis	The identified critical factors of TQM provide a comprehensive guideline for an effective and efficient implementation of TQM in technical institutes
Talib *et al.*, 2013a	Investigating the relationship between TQM practices and quality performance in Indian service companies	Questionnaire based survey plus factor, Pearson's correlation, and multiple regression	Quality culture was perceived as the dominant TQM practice in quality performance. The other practices such as quality

		analyses	systems, training and education, teamwork, and benchmarking showed a positive relationship with quality performance.
Talib *et al.*, 2013b	Identification and ranking of key practices of TQM and developing a reliable and valid instrument for the successful implementation of TQM program in Indian ICT industry	Questionnaire based survey, descriptive statistical, and factor analyses	Ten TQM practices found to be most important out of 17 practices identified from literature. Also, the instrument measures were found to have satisfactory psychometric properties
Yapa, 2012	Investigation on the use of TQM tools, techniques and concepts among Sri Lankan service organizations	Literature review and questionnaire survey	41 per cent of the organizations have implemented TQM. There is a lack of thorough understanding of TQM philosophies and techniques among the managers
Lam *et al.*, 2012	Examination of relationship between TQM, market orientation and service quality in the Malaysian service industry	Structural equation Modeling (SEM)	TQM has a positive and significant relationship with both market orientation and service quality
Koilakuntla et al., 2012	Estimation of TQM factor ratings	Analytical Hierarchy Process (AHP)	Top-management involvement score highest and training, employee involvement and process approach have scored second high
Harrington *et al.,* 2012	Identification of the quality and productivity problems, and improvement opportunities that face the construction industry of USA	Literature review plus interviews and surveys	There is a lack of good research for improved approaches and construction work is considered to be an undesirable profession
Lee, 2012	Implementation of quality programs in health care organizations	Questionnaire based survey	Two of the most widely used quality programs used in South Korea hospitals were quality control and TQM
Sit et al., 2011	Examination of association between TQM practices and service quality in Malaysia's commercial banking industry	Questionnaire based survey and multiple regression analysis	TQM dimensions such as leadership, strategic planning, information analysis and human resource management are significantly and positively associated with service quality
Baird *et al.*, 2011	Examining the relationships between organizational culture, TQM practices and operational performance in Australian business units	Questionnaire Survey, multiple régression analyses, and SEM	The cultural dimension is the most important factor in enhancing the use of TQM practices. While supplier quality management, process management, and quality data and reporting were found to help to achieve the operational performance goals

Talib *et al.*, 2011d	Understanding the mutual interaction of TQM barriers and identifying the driving barriers and the dependent barriers	Interpretive structural modeling (ISM)	12 TQM barriers are identified through the literature review and expert opinion. The research shows that there exist two groups of barriers.-one having high driving power and low dependency and other having high dependence and low driving power
Fotopoulos and Psomas, 2010	Determining the relationships between the TQM factors and organizational performance	Questionnaire survey, exploratory and confirmatory factor analysis, SEM	The TQM factors top-management, employee involvement in the quality management system, customer focus, process and data quality management and quality tools and techniques implementation significantly affect the companies' performance with respect to their internal procedures, customers, market share and the natural and social environment
Sit *et al.*, 2009	Investigation of relationship between TQM practices and customer satisfaction (CS) as perceived by managers' perspectives in Malaysia's service sector	Structural analysis	Leadership, customer focus, information and analysis, and human resource focus are found to have significant and positive association with CS as perceived by Malaysian service sector's managers
Chen and Chen, 2009	TQM measurement model for the biotechnology industry in Taiwan	Fuzzy analytic network process (FANP)	The study proposes a new TQM measurement model for the Taiwanese biotechnology industry
Claver-Cortés *et al.*, 2008	Studying the association of TQM with managerial factors and verifying whether more TQM-committed hotels achieve higher performance	Questionnaire survey, cluster and regression analyses	Managerial factors are significantly developed in hotels with a stronger TQM commitment, which also shows higher performances
Moghaddam and Moballeghi (2008)	Overview of TQM in the library and information sectors	Literature review	TQM is increasingly being applied in the service sector, including libraries

7. TQM Failures

Many organizations have been using TQM to improve firm performance and they are quite successful in implementing it, there are also some cases where organizations have failed to reap the benefits of TQM due to their different focus in its implementation (Brigham, 1993). Results do not always come quickly. It is generally acknowledge that the longer organizations work at TQM, the more successful

they will be. Two to three years into implementation have been quoted in the literature as the period after which some tangible benefits of TQM are more likely to be evident (Thiagarajan and Zairi, 1997). The success of implementing TQM in an organization is ultimately judged by its customers.

A TQM initiatives is therefore, considered a failure if it fails to delight customer and add value for customer satisfaction (Thiagarajan and Zairi, 1997). It is not surprising to note that these are as many TQM failures as there are success stories. Some of the common reasons for TQM setbacks and failures are:

- inadequate attention to different CSFs/QM practices during TQM implementation in the service organizations;
- failure to develop an implementation framework that fits to a specific service organization, instead a more generic model or a copy of a system that was successful for another organization was used;
- lack of top and middle management commitment, unrealistic expectations and time-frame, and cost of TQM implementation, under-reliance on statistical methods, and failure to develop and sustain a quality-oriented culture;
- high expectations of quick results from TQM initiatives;
- management reluctance in imparting training and education programs to employees for better understanding of TQM philosophy and use;
- lack of consensus, lack of employee empowerment, poor planning, lack of communication, management causing confusion, cross functional teams are not employed, and lack of direction and purpose;
- no targets, no attitude to attain higher productivity, lack of continuous improvement culture, lack of coordination between department, employee's resistance to change, and best practices of other companies are not benchmarked may be some of the other major reasons that causes the failure of TQM efforts.

Besides this there are several studies that have attempted to identify the major reasons for the failure of TQM efforts (Talib *et al.,* 2011a,d; Ljungström and Klefsjö, 2002; Tamimi and Sebastianelli, 1998; Bhat and Rajashekhar, 2009; Helms and Mayo, 2008; Huq, 2005; Mosadegh Rad, 2005).

8. Introduction to TQM Practices

Studies on TQM suggested that the successful implementation of TQM will result in improved communication, increased productivity, improved customer satisfaction, and competitive advantage (Prajogo and Sohal, 2003; Antony *et al.*, 2002; Tsang and Antony, 2001). Also, a strong competitive pressure has forced service organizations to adopt QM tools and techniques to offer higher quality products and services as a way to delight and keep their customers intact. Many organizations have implemented TQM and identified TQM practices/CSFs for better business performance in order to improve their position in the global market which has now become an important research area in TQM.

8.1. What are TQM Practices?

A literature review of the previous studies on TQM evolved that researchers and academicians have defined TQM practices in different ways although they are complementary to each other (Prajogo and Sohal, 2003; Terziovski and Samson, 1999). In general, the TQM practices can be defined as "the critical areas which an organization must accomplish to achieve its mission by examination and categorization of their impacts" (Oakland, 1995). On the other hand, according to (Boynton and Zmud, 1984) TQM practices are those vital constructs that must go well to ensure success for a manager or an organization, and therefore, they represent those managerial or organizational areas that must be

given special and continual attention to bring about increased performance. (Brotherton and Shaw, 1996) defined TQM practices as "the essential things that must be achieved by the company or areas which will produce the greatest competitive leverage". They emphasize that TQM practices are not objectives, but they are the actions and processes that can be controlled by management to achieve the organizations goals. The definition given by (Boynton and Zmud, 1984) is more universal which is equally applicable to all sectors. The importance of defining the TQM practices for implementation is to increase the success rate, reduce delivery time, and prevent disillusioned state with continuous improvement programs (Fryer *et al.*, 2007). Alternatively, it can be said that the TQM practices are those vital few requirements that must be present in an organization to help it to attain its vision, and to be guided towards its vision (Wali *et al.*, 2003). Hence, better management of such practices will result in improved quality and increased financial performance for the organization.

Further, an extent review of the previous studies on TQM key practices/CSFs for the successful implementation of TQM have been examined by several researchers and quality experts and are presented in Table 3. These studies have provided different sets of practices considered essential to the success of TQM implementation. This leads to inconsistencies in previous research which made it difficult to reach a conclusion on the practices of TQM (Ooi *et al.*, 2008; Hoang *et al.*, 2006). As such, no study has identified a common set of practices for successful implementation of TQM. Though there are some Quality Award models such as Malcolm Baldrige National Quality Award (MBNQA, 2005); European Quality Award (EQA, 1994); Deming Prize (1996); Kanji Business Excellence Model (KBEM), (Kanji, 2001) etc., which provide a useful framework for organizations and help in implementing TQM as well as evaluating their business performance results. According to Bayraktar *et al.* (2008), the following CSFs of TQM were identified: leadership, vision, measurement and evaluation, process control and improvement, program design, quality system improvement, employee involvement, recognition and award, education and training, student focus, and other stake holders focus. (Kanji and Wallace, 2000) go on to identify ten TQM practices: top-management commitment, customer focus and satisfaction, quality information and performance measurement, human resource management, employee involvement, teamwork, process management, quality assurance, zero defects, and communication. In a study, (Brah *et al.,* 2000) have identified the following 11 constructs of TQM: top management support, customer focus, employee involvement, employee training, employee empowerment, supplier quality management, process improvement, service design, quality improvement rewards, benchmarking, and cleanliness and organization.

The above mentioned literature review suggested that there are numerous TQM practices that can be identified as being crucial to the successful implementation of TQM (Table 3).

Table 3: *Research Studies on TQM Practices in Service Organizations*

Author(s)	Number of TQM Practices	TQM Practices	Outcome
Kumar *et al.,* 2011	7	Management commitment, customer satisfaction, continuous improvement, teamwork, employee's empowerment, training, feedback, and effective communication	Understanding benefits and shortcomings in TQM
Lee *et al.,* 2010	6	Leadership, strategic planning, customer focus, information and analysis, people management, and process management	Product innovation
Sadikoglu and Zehir, 2010	8	Leadership, training, employee management, information and analysis, supplier management, process management, customer focus, and continuous improvement	Innovation and employee performance

Talib *et al.,* 2010	17	Top-management commitment, customer focus, training and education, continuous improvement and innovation, supplier management, employee involvement, information and analysis, process management, quality systems, benchmarking, quality culture, human resource management, strategic planning, employee encouragement, teamwork, communication, and product and service design	Quality performance
Fotopoulos and Psomas, 2009	10	Leadership, strategic quality planning, employee management and involvement, supplier management, customer focus, process management, continuous improvement, information and analysis, knowledge and education, and quality tools and techniques	Increased organizational performance
Teh *et al.,* 2009	6	Leadership, strategic planning, customer focus, human resource focus, process management and information analysis	Role conflict of employees
Sit *et al.,* 2009	6	Leadership, process management, human resource focus, customer focus, information analysis and knowledge management, and strategic planning	Customer satisfaction
Teh *et al.,* 2008	6	Leadership, strategic planning, customer focus, human resource focus, process management and information analysis	Impact on role stressors
Saravanan and Rao, 2007	12	Top-management commitment and leadership, benchmarking, customer focus and satisfaction, service marketing, social responsibility, human resource management, employee satisfaction, service culture, servicescape, continuous improvement, technical system, and information and analysis	Quality and operational performance
Singh *et al.,* 2006	5	Top-management leadership, customer focus, supplier relationships, employees, and business processes	Successful implementation of ISO 9000 standards
Prajogo, 2005	7	Leadership, strategic planning, customer focus, information and analysis, people management, process management, and product quality	Increased quality performance

9. Guidelines to Effective TQM Implementation

Successful implementation of TQM program in service organization can be achieved by adopting a set of TQM practices and developing a model or framework based on these practices to get maximum benefits and desired outcome. The set of practices chosen depends upon the nature and characteristics of the service organization which is responsible for successful implementation of TQM program. For effective implementation of TQM and better results, following ten basic steps are identified.

    i.   Adoption of state-of-art and advanced technologies instead of following traditional culture by the top-management in the organization. Thus, top-management commitment is crucial to success.

    ii.   Developing quality awareness, imparting training and education on the principles and core concept of TQM to the employees, changing their attitudes and mind set towards quality culture, and commitment of never ending the continuous improvement and innovation in the organization.

iii.   Set the objectives or goals by involving employees at all levels and define them. This will act as the indicators of success in terms of mission.

iv.   Develop and document the approach to TQM and make sure that it is being practiced in the organizations and should not remain on papers only.

v.   Identify the key TQM practices for the organization and create an environment to implement and restrain them by force.

vi.   Prioritize the key TQM practices into different categories and focus on most important practices/categories responsible for improving the organization performance.

vii.   Further, breakdown the key TQM practices into sub-categories, activities, or tasks and form improvement teams.

viii.   Continuously monitor and control the process in response to the difficulties observed from feedback mechanism in the changed process.

ix.   Develop quality improvement teams to solve the quality related issues in quick time without delays. Communicate all the relevant activities, progress and result to the team members and management.

x.   Frequently review and improve the quality plans and measure performance.

Without a strategy to implement TQM the effort will lead to frustration of employee and thus, leads to the total failure of the TQM implementation. Therefore, all the employees should have prior knowledge of TQM and must be educated and trained before TQM is initiated for implementation. Implementation of TQM takes time as well as effort, and organizations must not regard TQM approaches as quick-fixes.

10. Conclusion

This research study has successfully presented a vast array of literature on TQM, its practices and other facets of TQM in service organization, thereby accomplishing all the objectives of the present study. This effort is more systematic in explaining the fundamentals and components of TQM. The study covered theory, concepts of TQM, its practices, service system together with the reasons of TQM failures, and approach to TQM implementation. By covering all the key issues as articulated by the objectives of the present study, this study makes a real contribution in:

- understanding the service system and the reasons for its growth;
- understanding TQM in service organization and its impact;
- understanding the role of TQM practices in service organizations;
- Knowing what causes 'TQM failure'?
- Understanding how TQM can effectively be implemented for better result?

From the review, it is concluded that organizations that want to implement TQM effectively must have patience because TQM takes a long time to get implemented and to have fruitful results. It requires major changes in cultural aspects as well as employee mindset in an organization. Further, the outcome of this study suggests that TQM is widely applied in the service sector and responsible for improved economy. Its implementation is associated with greater customer satisfaction and more

rigorously it is being implemented, the better the business performance. The present study can help service managers in better understanding of TQM and service quality concept, and their implementation in their organizations by considering the top-management commitment and customer focus as most important principles for service organizations. It will also help them to motivate and create a vision for the change.

Although this study successfully achieves the set objectives, there are opportunities for further research. Further in-depth investigation needs to explore other critical issues of TQM implementation like performance measurement, total environmental quality management (TEQM) as well as "hard" and "soft" issues of TQM specially the "hard" factors should be studied in details for better understanding of tools and techniques of TQM to measure the efficiency and effectiveness of service organizations In addition to this, there is a need to explore the TQM in those areas or sectors where it has been neglected or very little work has been done. Such areas can be identified and process of TQM implementation can be done. Some of these areas are: mobile service providers, transport services, police and security system, internet service provider, real estate, retail services, non-financial services and many others where TQM concept can enrich the working style, service quality and performance.
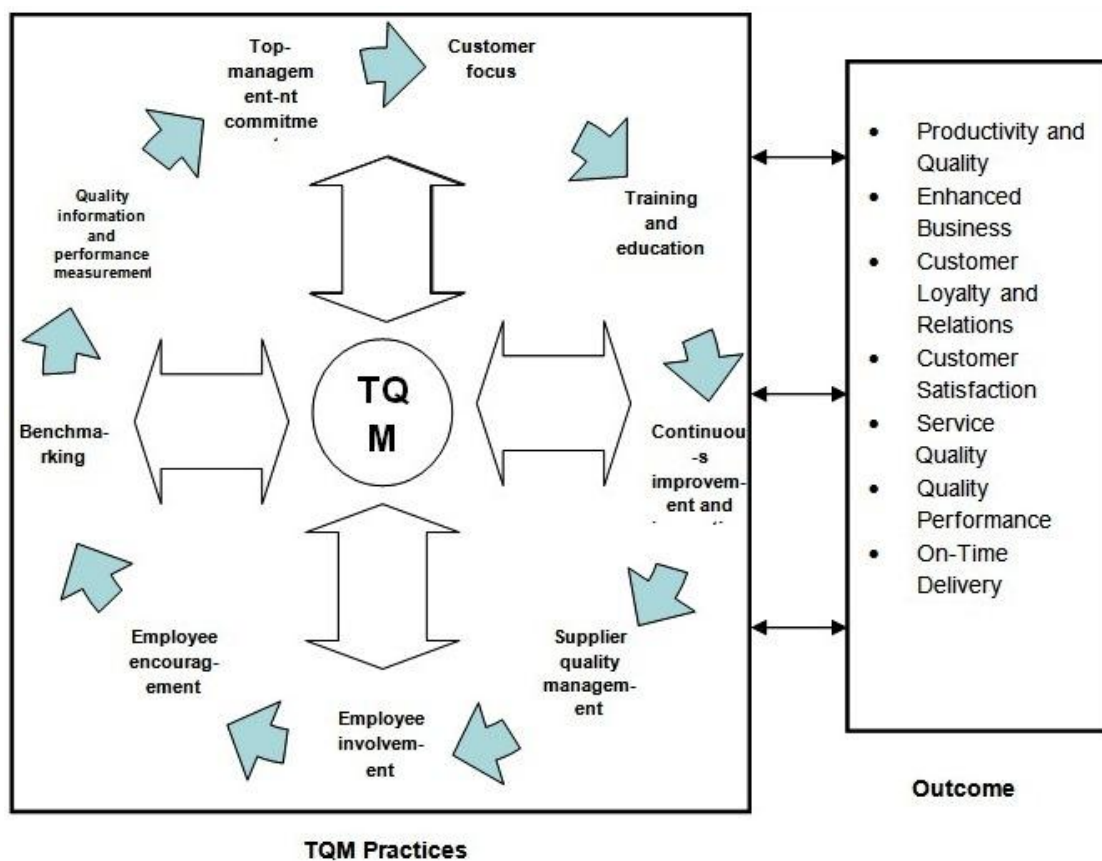
Figures

Figure 1: *Components of TQM*
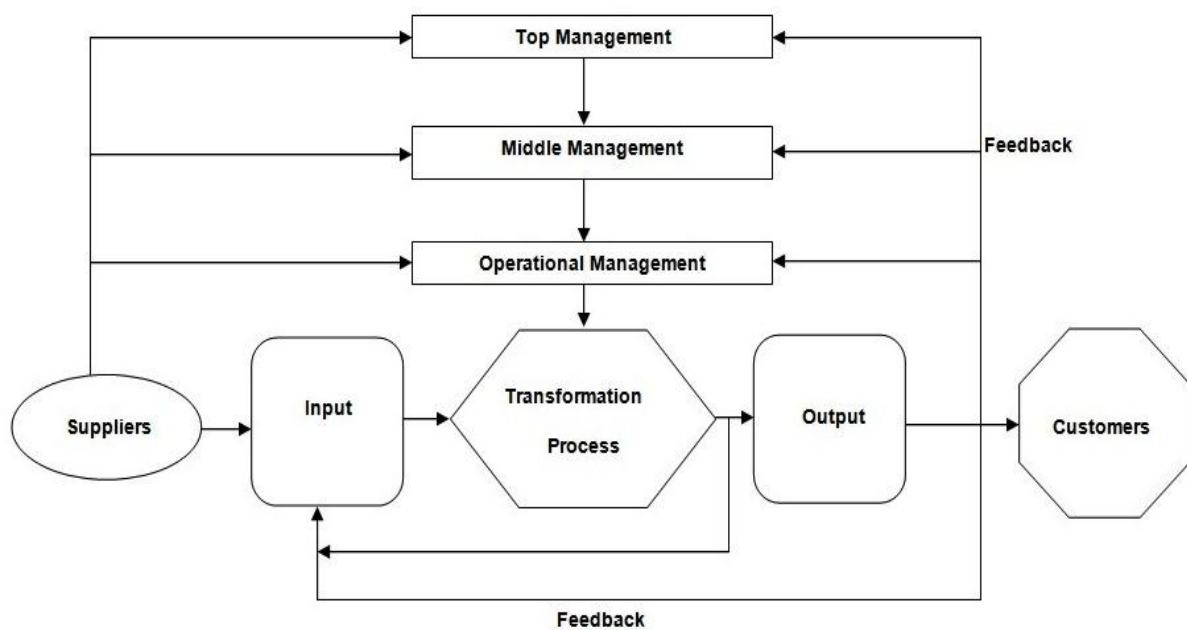*(Source: Talib and Rahman, 2010a)*

Figure 2: *A TQM System for Service Organization*
(Source: Mohanty and Lakhe, 2002)

References

Antony J. *Six Sigma vs. TQM: Some Perspectives from Leading Practitioners and Academics.* International Journal of Productivity and Performance Management. 2009. 58 (3) 274-279.

Antony J., et al. *Critical Success Factors of TQM Implementation in Hong Kong Industries.* International Journal of Quality and Reliability Management. 2002. 19 (5) 551-566.

Arumugam V., et al. *TQM Practices and Quality Management Performance- An Investigation of their Relationship Using Data from ISO 9001:2000 Firms in Malaysia.* The TQM Magazine. 2008. 20 (6) 636-650.

Baird K., et al. *The Relationships between Organizational Culture, Total Quality Management Practices and Operational Performance.* International Journal of Operations and Production Management. 2011. 31 (7) 789-814.

Bayraktar E., et al. *An Instrument for Measuring the Critical Factor of TQM in Turkish Higher Education.* Total Quality Management and Business Excellence. 2008. 19 (6) 551-574.

Bhat K.S., et al. *An Empirical Study of Barriers to Total Quality Management Implementation in Indian Industries.* The TQM Magazine. 2009. 21 (3) 261-272.

Boynton A.C., et al. *An Assessment of Critical Success Factors.* Slogan Management Review. 1984. 17-27.

Brah S.A., et al. *TQM and Business Performance in the Service Sector: A Singapore Study.* International Journal of Operation and Production Management. 2000. 20 (11) 1293-1312.

Brigham S.E. *Lessons we can learn from Industry.* Change. 1993. 25 (3) 42-47.

Brotherton B., et al. *Towards an Identification and Classification of Critical Success Factors in UK Hotels Plc.* International Journal of Hospitality Management. 1996. 15 (2) 113-135.

Chen J.K., et al. *TQM Measurement Model for the Biotechnology Industry in Taiwan.* Expert Systems with Applications. 2009. 36; 8789-8798.

Churchill G.A., et al. 1994: *Marketing: Creating Value for Customer*, Irwin, New York.

Claver-Cortés E., et al. *TQM, Managerial Factors and Performance in the Spanish Hotel Industry.* Industrial Management and Data Systems. 2008. 108 (2) 228-244.

Corredor P., et al. *TQM and Performance: is The Relationship so Obvious?* Journal of Business Research. 2011. 64; 830-838.

Cowell D., 1984: *The Marketing of Services.* Heinemann, London.

Crosby P.B., 1979: *Quality is Free.* Mc Graw-Hill, New York.

CSO, 2010: *Central Statistics Office.* Ministry of Statistics and Program Implementation, Government of India. Website: http://www.mospi.gov.in/cso_test1.htm.

Curkovic S., et al. *Total Quality Environmental Management and Total Cost Assessment: An Exploratory Study.* International Journal of Production Economics. 2007. 105; 560-579.

Dahlgaard J.J., et al. *Quality Management Practices: A Comparative Study between East and West.* International Journal of Quality and Reliability Management. 1998. 15 (8&9) 812-826.

Dean J.W., et al. *Management Theory and Total Quality: Improving Research and Practice through Theory Development.* The Academy of Management Review. 1994. 19 (3) 392-418.

Deming Prize, 1996: *Guide for Overseas Companies.* Union of Japanese Scientists and Engineers, Tokyo.

Deming W.E., 1986: *Out of the Crisis.* MIT Center for Advanced Engineering Study, Cambridge, MA.

Demirbag M., et al. *An Analysis of the Relationship between TQM Implementation and Organizational Performance.* Journal of Manufacturing Technology and Management. 2006. 17 (6) 829-847.

Eriksson H., et al. *The impact of TQM on Financial Performance.* Measuring Business Excellence. 2003. 7 (1) 36-50.

European Quality Award, 1994: *Self-assessment Based on the European Model for Total Quality Management: Guidelines for Identifying and Addressing Business Excellence Issues*, European Quality Award, Brussels.

Fotopoulos C.V. *The Impact of "Soft" and "Hard" TQM Elements on Quality Management Results.* International Journal of Quality and Reliability Management. 2009. 26(2) 150-163.

Fotopoulos C.V., et al. *The Structural Relationships between Total Quality Management Factors and Organizational Performance.* The TQM Journal. 2010. 22 (5) 539-552.

Fryer K.J., et al. *Critical Success Factors of Continuous Improvement in the Public Sector: A Literature Review and Some Key Findings*. The TQM Magazine. 2007. 19 (5) 497-517.

Gummersson E., *Lip Service: A Neglected Area in Services Marketing*. Journal of Services Marketing. 1987. 1 (1) 19-23.

Gustafsson A., et al. *The Role of Quality Practices in Service Organizations*. International Journal of Service Industry Management. 2003. 14 (2) 232-244.

Harrington H.J., et al. *Applying TQM to the Construction Industry*. The TQM Journal. 2012. 24 (4).

Helms M.M., et al. *Assessing Poor Quality Service: Perceptions of Customer Service Representative*. Managing Service Quality. 2008. 18 (6) 610-622.

Hendricks K.B., et al. *The long-Run Stock Price Performance of Firms with Effective TQM Programs*. Management Science. 2001a. 47 (3) 359-368.

Hendricks K.B., et al. *Firm Characteristics, Total Quality Management and Financial Performance*. Journal of Operations Management. 2001b. 19 (3) 269-285.

Hoang D.T, et al. *The Impact of Total Quality Management on Innovation: Findings from a Developing Country*. International Journal Quality and Reliability Management. 2006. 23 (9) 1092-1117.

Huq Z., *Managing Change: A Barrier to TQM in Implementation in Service Industry*. Managing Service Quality. 2005. 15 (5) 452-469.

Issac G., et al. *An Instrument for the Measurement of Customer Perceptions of Quality Management in the Software Industry: An Empirical Study in India.* Software Quality Journal. 2006. 14; 291-308.

Jannadi O.A., et al. *Measurement of Quality in Saudi Arabian Service Industry*. International Journal of Quality and Reliability Management. 2000. 17 (9) 949-965.

Kanji G.K., et al. *Business Excellence through Customer Satisfaction*. Total Quality Management. 2000. 11 (7) 979-998.

Kanji G.K. *Forces of Excellence in Kanji's Business Excellence Model*. Total Quality Management. 2001. 12; 259-272.

Khamalah J.N., et al. *A Study of Quality Management in Small Organizations Providing Services Directed at Peoples*. Journal of Business and Economic Research. 2003. 1 (2) 61-68.

Koilakuntla M., et al. *A Research Study on Estimation of TQM 'Factors Ratings' through Analytical Hierarchy Process*. Procedia Economics and Finance. 2012. 3; 55-61.

Kotler P., et al., 1993: *Marketing Management: Analysis, Planning, Implementation and Control*, 7th Canadian Ed., Prentice-Hall, Scarborough.

Kumar R., et al. *Total quality Management Success Factors in North Indian Manufacturing and Service Industries*. The TQM Journal. 2011. 23 (1) 36-46.

Lam S.Y., et al. *A Structural Equation Model of TQM, Market Orientation and Service Quality Evidence from a Developing Nation*. Managing Service Quality. 2012. 22 (3) 281-309.

Lee K.S. *Ergonomics in Total Quality Management: How can we Sell Ergonomics to Management?* Ergonomics. 2005. 48 (5) 547-558.

Lee D.H. *Implementation of Quality Programs in Health Care Organizations.* Service Business. 2012. 6; 387-404.

Lee V.H., et al. *A Structural Analysis of the Relationship between TQM Practices and Product Innovation*. Asian Journal of Technology Innovation. 2010. 18 (1) 73-96.

Lewis W.G., et al. *An AHP-Based Study of TQM Benefits in ISO9001 Certified SMEs in Trinidad and Tobago.* The TQM Magazine. 2005. 17 (6) 558-572.

Ljungström M. et al. *Implementation Obstacles for a Work-Development-Oriented TQM Strategy.* Total Quality Management. 2002. 13; 621-634.

Mahapatra S.S., et al. 2006: *A Methodology for Evaluation of Service Quality Using Neural Networks.* Proceedings of the International Conference on Global Manufacturing and Innovation, July 27-29, 1-9.

Malcolm Baldrige National Quality Award, 2005: *The Malcolm Baldrige National Quality Award: Criteria for Performance Excellence.* National Institute of Standards and Technology, Gaithersburg.

Mansour A., et al. *Is Total Quality Management Feasible in a Developing Context? The Employees' Perspective in the United Arab Emirates Public Sector*. International Journal of Public Administration. 2013. 36 (2) 98-111.

Mehra S., et al. *Implementing TQM with a Focus on Enhancing Customer Satisfaction.* International Journal of Quality and Reliability Management. 2008. 25 (9) 913-927.

Moghaddam G.G., et al. *Total Quality Management in Library and Information Sectors*. The Electronic Library. 2008. 26 (6) 912-922.

Mohanty R.P., et al., 2002: *TQM in Service Sector*. 1st Ed. A Jaico Publication, Mumbai.

Mosadegh Rad, et al. *A Survey of Total Quality Management in Iran-Barriers to Successful Implementation in Health Care Organizations.* Leadership in Health Services. 2005. 18 (3) 12-34.

Oakland S., 1995: *TQM-Text with Cases.* BH Ltd., Oxford.

Ooi K.B., et al. *TQM Practices and its Association with Production Workers*. Industrial Management and Data Systems. 2008. 108 (7) 909-927.

Ooi K.B., et al. *Are TQM Practices Supporting Customer Satisfaction and Service Quality?* Journal of Services Marketing. 2011. 25 (6).

Prajogo D.I. *The Comparative Analysis of TQM Practices and Quality Performance between Manufacturing and Service Firms*. International Journal of Service Industry Management. 2005. 16; 217-228.

Prajogo D.I., et al. *The Relationship between TQM Practices, Quality Performance, and Innovation Performance: An Empirical Examination*. International Journal of Quality and Reliability Management. 2003. 20 (8) 901-918.

Ramayah T., et al. *Market Orientation, Service Quality and Organizational Performance in Service Organizations in Malaysia*. Asia-Pacific Journal of Business Administration. 2011. 3 (1) 8-27.

Rönnbäck A., et al. *A Review of Empirical Investigations Comparing Quality Initiatives in Manufacturing and Service Organizations*. Managing Service Quality. 2008. 18 (6) 577-593.

Sachdeva A., et al. *Impact of ISO 9000 Certification on Performance of SMEs: A Study of Indian Industry*, International Journal of Management Practice. 2007. 2 (3) 226-239.

Sadikoglu E., et al. *Investigating the Effects of Innovation and Employee Performance on the Relationship between TQM Practices and Firm Performance: An Empirical Study of Turkish Firms*. International Journal of Production Economics. 2010. 127 (1) 13-26.

Sahu A.R., et al. *Critical Success Factors for Sustainable Improvement in Technical Education Excellence: A Literature Review*. The TQM Journal. 2013. 25 (1).

Sarathy P.S. *TQM Practice in Real-Estate Industry Using AHP*. Quality Quantity. 2013. 47; 2049-2063.

Saravanan R., et al. *The Impact of Total Quality Service Age on Quality and Operational: An Empirical Study*. The TQM Magazine. 2007. 19 (3) 197-205.

Schein L., 1991: *Communicating Quality in the Service Sector*, the Conference Board, New York, N.Y.

Schneider B., et al., 2004: "Service Climate". In B. Schneider & S. White (Eds.) Service Quality: Research Perspectives. Sage Publications, Thousand Oaks, CA, 91-134.

Seetharaman A., et al. *Critical Success Factors of Total Quality Management*. Quality and Quantity. 2006. 40; 675-695.

Sila I., et al. *An Investigation of the Total Quality Management Survey Based Research Published between 1989 and 2000: A Literature Review*. International Journal of Quality and Reliability Management. 2002. 19 (7) 902-970.

Singh A.K., et al. *Modeling Enablers of TQM to Improve Airline Performance*. International Journal of Productivity and Performance Management. 2013. 62 (3).

Singh P.J., et al. *ISO9000 Series of Standards: Comparison of Manufacturing and Service Organizations*. International Journal of Quality and Reliability Management. 2006. 23 (2) 122-142.

Sit W.Y., et al. *TQM and Customer Satisfaction in Malaysia's Service Sector*. Industrial Management and Data Systems. 2009. 109 (7) 957-975.

Sit W.Y., et al. *TQM and Service Quality: A Survey of Commercial Banking Industry in Malaysia*. International Journal of Services, Economics and Management. 2011. 3 (1) 708-91.

Stanton W.I., 1986: *Fundamentals of Marketing*. McGraw-Hill, Singapore.

Svensson G. *Leadership Performance in TQM: A Contingency Approach*. The TQM Magazine. 2005. 17 (6) 527-536.

Talib F., et al. *An Empirical Investigation of Relationship between Total Quality Management Practices and Quality Performance in Indian Service Companies*. International Journal of Quality and Reliability Management. 2013a. 30 (3) 280-318.

Talib F., and Rahman Z. *Critical Success Factors of TQM in Service Organizations: A Proposed Model*. Services Marketing Quarterly. 2010a. 31 (3) 363-380.

Talib F., and Rahman Z. *Studying the Impact of Total Quality Management in Service Industries*. International Journal of Productivity and Quality Management. 2010b. 6 (2) 249-268.

Talib F., and Rahman Z. *Current Health of Indian Healthcare and Hospitality Industries: A Demographic Study*. International Journal of Business Research and Development. 2013. 2 (1) 1-17.

Talib F., et al. *An Instrument for Measuring the Key Practices of Total Quality Management in ICT Industry: An Empirical Study in India*. Services Business. 2013b. 7 (2) 275-306.

Talib F., et al. *The Relationship between Total Quality Management and Quality Performance in the Service Industry: A Theoretical Model.* International Journal of Business, Management and Social Sciences. 2010. 1 (1) 113-128.

Talib F., et al. *A Study of Total Quality Management and Supply Chain Management Practices.* International Journal of Productivity and Performance Management. 2011b. 60 (3) 266-288.

Talib F., et al., 2011c: *Identifying the Key Practices of TQM in Indian Service Industries: An Empirical Analysis*. Proceedings of International Conference on Advances in Supply Chain and Manufacturing Management (ASCMM 2011). Department of Industrial Engineering and Management, Indian Institute of Technology Kharagpur (IITKhg), West Bengal, India.

Talib F., et al. *Analysis of Interaction among the Barriers to Total Quality Management Implementation Using Interpretive Structural Modeling (ISM) Approach*. Benchmarking: An International Journal. 2011d. 18 (4) 563-587.

Talib F., et al. *Total Quality Management in Service Sector: A Literature Review*. International Journal of Business Innovation and Research. 2012. 6 (3) 259-301.

Talib F., et al. *Total Quality Management and Service Quality: An Exploratory Study of Management Practices and Barriers in Service Industries*. International Journal of Services and Operations Management. 2011a. 10 (1) 94-118.

Tamimi N., et al. *The Barriers to Total Quality Management*. Quality Progress. 1998. 31 (6) 57-60.

Teh P.L., et al. *Does TQM Impact on Role Stressors? A Conceptual Model*. Industrial Management and Data Systems. 2008. 108 (8) 1029-1044.

Teh P.L., et al. *Does Total Quality Management Reduce Employees Role Conflict?* Industrial Management and Data Systems. 2009. 109 (8) 1118-1136.

Terziovski M., et al. *The Link between Total Quality Management Practice and Organizational Performance*. International Journal of Quality and Reliability Management. 1999. 16 (3) 226-237.

The World Bank Group, 2010: *World Development Indicators*.
http://data.worldbank.org/indicator.

Thiagarajan T., et al. *A Review of Total Quality Management in Practice: Understanding the Fundamentals through Examples of Best Practices Applications-Part III.* The TQM Magazine. 1997. 9 (6) 414-417.

Tsang J.H.Y., et al. *TQM in UK Service Organizations: Some Key Findings from a Survey*. Managing Service Quality. 2001. 11 (2) 132-141.

Ueno A. *Which Management Practices are Contributory to Service Quality?* International Journal of Quality and Reliability Management. 2008. 25 (6) 585-603.

Wali A.A., et al. *Critical Success Factors of TQM: A Select Study of Indian Organizations*. Production, Planning and Control. 2003. 14 (1) 3-14.

Yang C.C., et al. 2012: *An Integrated Model of the Toyota Production System with Total Quality Management and People Factors*. Human Factors and Ergonomics in Manufacturing and Service Industries. 1-12.

Yapa S., *Total Quality Management in Sri Lankan Service Organizations*. The TQM Journal. 2012. 24 (6).

Yasin M.M., et al. *TQM Practices in Service Organizations: An Exploratory Study into the Implementation, Outcome and Effectiveness*. Managing Service Quality. 2004. 14 (5) 377-389.

Yusof S.M., et al. *Critical Success Factors for Total Quality Management in Implementation in Small and Medium Enterprises*. Total Quality Management. 1999. 10 (4&5) 803-809.

Yusof S.M., et al. *TQM Implementation Frameworks: Comparison and Review*. Total Quality Management. 2000. 11 (3) 281-294.

Yusof S.M., et al. *Case Studies on the Implementation of TQM in the UK Automotive SMEs*. International Journal of Quality and Reliability Management. 2001. 18 (7) 722-743.

Yusuf Y., et al. *Implementation of TQM in China and Organizational Performance: An Empirical Investigation*. Total Quality Management. 2007. 18 (5) 509-530.

Zhang Z., et al. *An Instrument for Measuring TQM Implementation for Chinese Manufacturing Companies*. International Journal of Quality and Reliability Management. 2000. 17 (7) 730-755.

Zu X., et al. *Mapping The Critical Links between Organizational Culture and TQM/Six Sigma Practices*. International Journal of Production Economics. 2010. 123; 86-106.