

Exploring tqm  
implementation  
critical success  
factors management  
essay



This research represents an in-depth study of the literature on critical success factors of Total Quality Management (TQM) and supported by a diversity of philosophies of TQM. Such factors are well thought-out as will contribute to the success of TQM implementation process.

Critical Success Factors and barriers are inner or outer factors that can significantly have a consequence on the firm for better or worse. They provide an early concern system for management and a way to keep away from surprises or missed opportunities. In the background of TQM, it is necessary that the organizations recognize a few key factors, which should be given individual attention for ensuring successful execution of TQM. Through a thorough and comprehensive analysis of literature, 6 success factors with 43 elements were recognized to develop a questionnaire.

The current research will direct the researchers in selecting the dependable set of factors for empirical studies. Industries can take advantage by adopting the results of this study for successful implementation of TQM.

Keywords: TQM; Critical Success Factors; Barriers; Implementation; Construction Firms.

## **1. INTRODUCTION**

The construction industry of any nation is the strength of character of its infrastructure and economy. However, it is a key provider to the economy of any nation; it faces the problems of high disintegration, instability, low output, poor quality and low standards. Due to the beyond mentioned quality problems, construction clients are not pleased with the performance achieved on many of their projects (Kometa & Olomolaiye 1997).

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In the present day, quality management has turned out to be one of the significant forces important to organizational growth and a company's accomplishment in national and international markets. The place of quality in construction has also been exposed by Belle and Burati et al (2000). In order to draw attention to the role of quality, different aspects of quality tools and techniques have been also described in previous studies (Belle 2000, Metri 2004). Most of the companies are aggravated in their attempt to get better quality through TQM because these companies have completely focused on financial measures as an alternative of quality measures. Construction firms therefore need to recognize the TQM critical success factors for the successful implementation of TQM. Therefore, there is a serious necessity to set up TQM CSFs for construction firms. This study examines the TQM frameworks developed by scholars and businesses and develops the TQM CSFs for construction firms.

## **1.1 Total Quality Management Definitions-**

In 1980s and 1990s, the world witnessed what could be called a “ quality revolution” due to the globalization of the marketplace and increased competition. As a result, Total Quality Management (TQM) became one of the dominant managerial themes in the 1990s. The successful experience of the manufacturing sector within both Japan and United States in implementing TQM in the 1980s encouraged other nations, as well as other sectors, to adopt the approach. Indeed, the widespread interest in adopting TQM has spread beyond profit-oriented organizations into public services organizations.

The British Standards (BS4778) defines TQM as:

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“ A management philosophy embracing all activities through which the needs and expectations of the customer and the community and the objectives of the organization are satisfied in the most efficient and cost effective way by maximizing the potential of all employees in a continuing drive for improvement”.

The American Society for Quality (ASQ) defines TQM as:

“ The management approach of an organization centered on quality, based on the participation of all of its members and aiming at long-term success through customer satisfaction and benefits to all members of the organization and to society”.

From the reassess of a variety of definitions of TQM, it seems that academics and quality gurus perceive TQM to be a beliefs or concept; while consultants and practitioners prefer to think of TQM as structure or system. Perceiving TQM as a philosophy or concept liberates TQM from constraints. On the other hand, perceiving TQM as a structure or system could push TQM away from one of its key essences, which is continuous improvement and flexibility to change.

## **2. LITERATURE REVIEW**

The construction industry in many parts of the world suffers from trouble such as time and cost overrun. As a result, numerous Governments initiated reports such as the Gyles Report (1992) Australia; the Latham report (1994) UK and Egan Report (1998) UK. These reports have been significant of the construction industry and its poor performance. A necessitate for change

becomes foreseeable in order to improve the condition of the construction  
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industry. According to Love et al (2000) and Nesan and Holt (1999), the industry problems will stay until each organization in the procurement of construction industry begins to take the responsibility for initiating changes inside their own organizations. Such change can be initiated throughout the successful implementations of TQM.

Strange and Vaughan (1993), addressed the reasons why implementation of TQM in the construction industry is demanding. They stated the reason for the challenge is the point of view, or concept, that construction leaders have about their industry. The construction leaders, they argued, believe in what can be called the five “cant’s” (Strange and Vaughan, 1993):

You can’t apply industrial management solutions to construction, because of the unique nature of the construction industry.

You can’t do statistical analysis of construction processes, because they are unique and non-repetitive.

You can’t invest in training at the job level, because individual employment is short-term, the people have no company loyalty and the environment is too difficult.

You can’t spend money on management programmes, because there is too much competition and the margins won’t allow it.

You can’t take time away from doing the work for seminars, retreats or symposia.

Strange and Vaughan recommended that the solution to overcoming the challenge is to have an innovative definition for the two words “ product” and “ success”. They believe that “ product” must be redefined to be the management service provided in planning and executing a construction project as an alternative of defining it as the finished building or project. Also, “ success” should be redefined to mean meeting the goals of the customers of that product instead of defining it as meeting company goals for profit, growth and so on.

According to Yiwei and Eng (2000), one of the most important difficulties preventing wider implementation and acceptance of TQM in the construction industry is the barrier caused by usual or conventional practice. One example is the usual way in which project bids are evaluated with the heaviest importance on price. It is extensively known that the client regularly selects the contractor base mainly on the lowest price with less thought for past experience, current workload and reputation for quality. This situation does not give contactors any encouragement to implement TQM principles. The long-term nature of a successful TQM implementation also creates a major problem, particularly in the construction industry. The unexpected changes of the market, for example, that threatens the survival of contractor could convey the firm from the long-term objectives to the urgent corrective actions. The construction industry is known for its fluctuations, which has the result of making construction reactive rather than proactive.

Further TQM practitioners say that if a company’s culture is not conducive to total quality, the culture must be altered before a total quality programme can be implemented. There appears to be a multitude of reasons why <https://assignbuster.com/exploring-tqm-implementation-critical-success-factors-management-essay/>

companies fail in their effort to implement a quality management system. However, two common problems become visible to be a lack of strategic planning and a lack of suitable culture supportive of TQM programmes (Sebastianelli and Tamimi, 2003). The study of Liu 1998 and Rahim and Whalen 1994 showed lack of top management support and lack of proper training as the main barriers for TQM implementation. Therefore, it is vital for all organizations to recognize and avoid these barriers both before and during TQM implementation (Tamimi and Sebastianelli, 1998). An extensive literature review carried out by Masters (1996) found 15 distinct barriers to TQM that are common to all types of organization.

Salegna and Fazel (2000) have listed 16 obstacles which companies have reported when implementing TQM. Further, Tamimi and Sebastianelli (1998) have acknowledged many problems that companies may experience while implementing TQM. Their survey was intended at determining the degree to which these obstacles were really experienced by the responding organizations. The study of Amar and Zain (2002), established 11 factors seen to be the barriers associated with the successful implementation of TQM in organizations. Gunasekaran (1999) examined the enablers of TQM implementation using structured interviews of employees from different functional areas of the organization. Emphasizing people-oriented factors, such as teamwork and empowerment; he found that poor communication between departments was a real barrier to implementing TQM. Finally, Ngai and Cheng (1997) derived the following four factors as the barriers for the implementation of TQM from their 17-item scale:

Cultural and employee barrier;

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Infrastructure barrier;

Managerial barrier; and

Organizational barrier

### **3. IMPORTANCE OF STUDY**

There is a general consensus that we need more empirical and theoretical debate about TQM. We usually do not know, for example, what and how the key elements influence the TQM implementation process and how these elements should be addressed and managed in an organization (Zink, 1995). We may require further empirical testing. For example, TQM is mainly designed from the developed world, and it is not clear if it is appropriate in most developing countries. Thiagrajan and Zairi (1998) argue that to study critical quality factors for successful TQM implementation, a descriptive approach is more suitable than a normative one. The descriptive approach helps to determine and explain the detailed variation in a situation from an individual, organizational, industry, or any other perspective (Sekaran, 2003). This also involves the assortment of the most suitable organizations meeting a set of quality factors critical to successful quality initiatives in their organizations. This approach involves three different levels of inquiry to address the “ what and how” elements of TQM implementation.

### **4. BENEFITS OF TQM**

TQM is an expert system to improve an organization’s competitiveness. Kanji & Asher (1993) “ TQM is about continuous performance improvement of individuals of groups and of organizations”. As long as TQM is adopting



completely and practised successfully in an organization, many advantages will be delivered. It will reinforce the organizational business performance and competitive advantage. The successful implementation of TQM in to a company will benefit in (Fox, 1993):

It makes the company centre of attention clearly on the needs of its customers. This is necessary for a company to endure in the competitive market;

It assists in implementing the simple procedures essential for the accomplishment of quality performance;

It helps, significantly and continuously, in examining all processes to remove non-productive activities and waste;

It determines the necessary improvements and develops a measure of performance;

It provides full, in depth understanding of the competition and develops an successful competitive strategy;

It develops the team approach to problem solving;

It develops good procedures for communication and recognition of outstanding work;

It reviews continuously the processes to expand the strategy of never ending improvement;

Management objectives such as customer satisfaction, meeting quality specification, higher productivity, zero defects, and decrease in costs, can be achieved by embodying TQM ethics in all aspects of the organization.

## **5. SELECTION OF TQM CRITICAL SUCCESS FACTORS FRAMEWORKS**

The TQM frameworks for this research paper were obtained through a massive search of previous research in the area. The appropriate literature has made known that different countries have adopted comparable TQM frameworks in the category of quality awards with a distorted title.

Nowadays, there are more than a hundred awards active in different countries. However, all these awards are basically lacking in originality from three central and important awards: the Malcolm Baldrige National Quality Awards (MBNQA), the European Quality Award (EQA), and the Deming Prize. This study, therefore, includes only these awards as TQM frameworks beside with other frameworks developed by preceding researchers. Moreover, through the study of TQM literature, six TQM frameworks developed by researchers have been selected. In total, nine important TQM frameworks viz. Deming prize, MBNQA, EQA, Saraph et al, Black and Porter, Tamimi, Ahire et al, Nwabueze and Joseph et al were selected from the TQM literature for the point of establishing TQM critical success factors for the construction industry.

Empirical TQM studies started to increase after 1989 when the critical success factors of TQM were first operationalize by Saraph (1989). A survey move towards to the operationalize of TQM CSFs by this research work set a new way for TQM researchers concerned in the set of CSFs that constitutes <https://assignbuster.com/exploring-tqm-implementation-critical-success-factors-management-essay/>

TQM. Saraph, Benson and Schroeder (1989) pioneered an empirical approach to scrutinize the critical factors for TQM implementation. They acknowledged eight critical factors of quality management at the business unit level with 66 elements. Later, some authors have developed a similar approach to identify and examine the factors of success. Table 1 review and compare those CSFs developed by researchers such as Saraph (1989), Black and Porter (1996), Tamimi (1998), and Joseph (1999).

## **TQM frameworks**

### **Critical success factors\***

**1**

**2**

**3**

**4**

**5**

**6**

**7**

**8**

**9**

**10**

**11**

Deming prize (2004)

**X**

**X**

**X**

**X**

**X**

**X**

MBNQA (2004)

**X**

**X**

**X**

**X**

**X**

**X**

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**X**

**X**

EQA(2004)

**X**

**X**

**X**

**X**

**X**

**X**

**X**

**X**

Saraph et al (1989)

**X**

**X**

**X**

**X**

**X**

**X**

**X**

Tamimi (1998)

**X**

**X**

**X**

**X**

**X**

**X**

**X**

**X**

Joseph et al (1999)

**X**

**X**

**X**

**X**

**X**

**X**

**X**

Ahire et al. (1996)

**X**

**X**

**X**

**X**

**X**

**X**

**X**

**X**

**X**

**X**

Black and Porter (1996)

**X**

**X**

**X**

**X**

**X**

**X**

**X**

**X**

Nwabueze (2001)

**X**

**X**

**X**

**X**

**X**

**X**

**X**

**X**

**X**

TABLE 1- TQM FRAMEWORKS Note\*: 1- Top management commitment; 2- Quality managing; 3-Process quality managing; 4- Design quality managing; 5- Education and Training; 6- Supplier Quality managing; 7- Customer fulfilment; 8- Employee empowerment and involvement; 9- Business results; 10- Communication; 11- Continuous improvement.

## **6. ESTABLISHMENT OF CRITICAL SUCCESS FACTORS**

From the literature review performed, the fact is clear that even though lots of researches have been carried out in exploring the TQM beliefs and identifying the success factors for implementation of TQM philosophy in construction industry. But, many construction firms have failed miserably in an attempt to grow under the principles of TQM. Brown et al (1994) identified what they consider are the reasons for TQM implementation failure.

Organizations go through three identifiable phases during the pursuit of TQM. These phases are:

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Start-up: This is the primary stage where workers at all levels get themselves familiar with the basic principles of TQM. This stage also involves implementing quality improvement projects using the tools and techniques of TQM.

Alignment: In this phase, the organization realizes that it should align its organizational systems and practices to maintain quality and team work.

Integration: In the third phase, the organization integrates TQM principles in to every part of the organization's operations. Each phase has its own challenges and general mistakes. Table 2 list the common reasons for TQM failure in each phase.

**NO**

**PHASE**

**TQM FAILURE**

1

Start up

Lack of management commitment

Poor training and pacing

Wasted education and training

Lack of short-term, bottom line result.

2

Alignment

Divergent strategies

Inappropriate measures

Outdated appraisal

Inappropriate rewards

3

Integration

Failing to transfer true power to employees

Maintaining outmoded management practices

Poor organization and job design

Outdated business systems

## **TABLE 2- REASONS FOR TQM FAILURE**

In this empirical study, the general point is to use the perceptions and experiences of TQM-based companies and use this information as the source of data collection. Therefore, this paper's intention is primarily identifying the critical quality factors by interpreting the consensus amongst construction organizations as to the level of perceived importance. The preceding TQM frameworks and the reasons for the not a success of the TQM implementation process made known that not all the frameworks are complete, but in many aspects these frameworks balance one another. After

a thorough review of the prescriptive, theoretical, practitioner, and empirical literature on quality management, the proposed model used in this empirical study identifies six constructs (with 43 variables) of QM as critical for the institution of a TQM in construction organizations. The critical success factors that have been identified are shown in the figure below:

## **7. AIMS & OBJECTIVES**

The main aim of this research is to examine how the TQM implementation can be improved more effectively in the construction industry. It helps to take necessary steps for the implementation of TQM in construction firms.

The objectives of this research are as follows:

To identify the critical success factors in implementing TQM in construction firms

To identify the various barriers that opposes the successful implementation of TQM

## **8. RESEARCH METHODOLOGY**

Data for this study will be gathered using a mail questionnaire. This questionnaire already sends out to quality managers of the firms. The research started from collecting the possible literatures on TQM from the journals, books, websites, and current working construction firm. The questionnaire consists of three sections, first section deals with the demographic details of the respondent, and other two sections deals with statements measuring on critical success factors and barriers of TQM implementation. Apart from the survey the interviews will be conducted from

individuals who are having the experience of implementing the quality procedures in the construction firms of experience more than 10 years and appropriate duration will not be more than 15-30minutes time. The answers have to be marked on a 5 point Likert scale with total agreement on one side and total disagreement on the extreme end. The initial draft of the questionnaire was scrutinized by the supervisor. The 5 point scale will meet the desired objectives by allowing the uniformity in the measurement recorded and the ranking of the responses.

## **9. CONCLUSION**

Furthermore, in accord with thorough and in depth analysis of the literature, it might be concluded that the six-factor model is a dependable and applicable instrument for measuring the perceived importance of the quality factors to the success of TQM implementation in the construction organization. However, critical success factors have positive and considerable effects on TQM implementation in construction firms. From the identified factors management commitment will be the most important factor for the successful implementation of TQM. Management involvement and continuous participation is essential to guide and make possible the implementation. Communication will appear as the second most critical success factor, which reflects those organizations have a comparatively open culture. Finally, training and education will be the third most important success factor through which companies have spent a huge attempt and investment on the development of employees and teamwork. By accepting the potential severity of such factors, organizations are in a better position to look forward to and solve the problems which may arise in future. As a

means of attaining higher effectiveness, it is essential to identify and understand the factors that can obstruct the success of TQM implementation. Management must understand that they do exist and should deal with these identified factors while TQM implementation process. Therefore, the organizations can benefit from a better understanding of barriers of TQM.