



Implication of Total Quality Management (TQM) to Innovate, Manage Change and Enhancing Customer Satisfaction: A Qualitative Study

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Article	Abstract
<p>Article history: Received: 28th April 2022 Received in revised form: 10th May 2022 Accepted: 13th May 2022</p> <p>Keywords: Total Quality Management, Management of Change, Customer Satisfaction, Innovative</p>	<p>The new and challenging global business climate has brought a "new thinking" to industries and calls for innovative methods of operations. "Innovate or evaporate" has become a catch phrase. Critically thinking of customers' satisfaction and being open to managing change are so rampant in the new world and technologically driven customer base. The main purpose of this study is to provide a better insight into Total Quality Management (TQM) toward customers' satisfaction and to elucidate the other sub-components of this approach.</p>

1. Introduction

Total Quality Management (TQM henceforth) has come to be widely used in the work sector for the last few decades. This study aims to provide a better understanding of the implications of TQM towards innovation, managing change, and enhancing customer satisfaction. In conducting this study, TQM-related keywords were used, and the Google Scholar search engine was employed to find available publications. From a large number of publications, 40 more related articles were selected to be precisely studied and reviewed. Out of these 40 papers, 27 (or 68%) used implementation of TQM and 32% studied the review of the method. In relation to implementation, 74% of the researchers used survey data facilitated by using questionnaires. About 26% used other means, like companies' historical data.

In the true historical sense, TQM is not a new concept as it has existed since 2000 BC. In the code of Hammurabi (229), "... if a builder has built a house for a man and his work is not strong and the house falls in and kills the house holder, that builder shall be slain" [1]. Modern day TQM would begin with the work of Deming, an American statistician [2]. He, together with a few others, was the pioneer of TQM. The Japanese, after World War 2, began applying TQM in their quest to become the "salesman" of the world. Japanese use of TQM in the 80's and their outstanding success in industry influenced the US, the UK, and many other countries to adopt their TQM model [3, 41-45].

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As a result, the primary elements of TQM would be [46-50]:

- **Customer focused operations** as they determine the degree to which quality is met. The proof of the pudding is in the eating' the saying goes. Consequently, whatever internal or external organization or reorganization is done in an organization, it must have a focus on the customer, who remains paramount.
- **Organization-wide**, all-round employee improvement is imperative so that all work towards a common goal. There is no fear and employees are empowered with self-managed work teams and the right working environment. They are all motivated and looking for continuous improvement.
- **A focus on process**, as this is a fundamental part of TQM. "By process" means the series of steps taken or inputs from suppliers, both internal and external, that would transform into outputs that are ready to be delivered to end users, who may be internal or external organizations. Such steps are measured, verified, and recorded in order to note any deviations or variations.
- **The integration of systems**, where the horizontal processes interconnect all functions, including the vertical ones, is the focus of TQM. Everyone must understand the vision, mission, quality policies, and objectives. A good quality culture must be fostered in order to attain excellent product outputs.
- **Systematic operations to attain quality management** can only be achieved with a systematic approach. The formulation of a strategic plan will integrate quality as a core component.
- **Decision making and continuous improvement** can only be done with information that is required to make decisions. Therefore, an organization collects information and analyses it to arrive at any decision. Furthermore, in order to be more competitive, continuous improvement as a benchmark is paramount to living up to shareholders' wants and needs.
- **Effective implementation of improvements** is necessary. After decisions have been made to improve, all affected employees must be trained to implement, monitor, and manage these changes and improvements. Top management must be informed and involved, and they must be committed to these changes in every aspect. There must always be continuous communication to motivate and build up the morale of employees at all levels.

In the quest for profits, excellence, and quality, business organizations cannot ignore Total Quality Management, or TQM. This is an important management tool and abundant literature shows that the implementation of TQM brings about various benefits, including efficiency in business; cost reduction, enhanced productivity; improvement in quality; scheduled delivery; increased staff morale; better working environment; good superior-subordinate coordination/cooperation; and becoming more competitive [4, 5, 6]. Many studies reviewed supported the significant input of TQM [7, 8]. The implementation of the core functionality of TQM will bring about the long-term success of any business, mainly through customer satisfaction. In this context, all members of an organization will partake in improving the processes, products, services, and work culture.

Becker [9] found that there was a 90% improvement rate in employee relations, operating procedures, customer satisfaction, and financial performance with the implementation of TQM. TQM has been applied as an applied process in order to improve competitiveness [10], and has a positive impact on employee satisfaction. Nevertheless, all is not rosy for the implementation and development of the guidelines of TQM in an industry or organization. Some researchers differ in their views on the effectiveness of TQM strategies [11]. In fact, globally, 70 to 90 percent of businesses that implemented TQM techniques failed [12].

There are many barriers and hurdles to the successful implementation of TQM. The structural barriers may be there, and it is important to know how they affect effective implementation of TQM and how far employees partake in innovation. It is also essential to understand whether management and employees embrace change constantly or not. Furthermore, there is a sufficient budget allocation to implement TQM and make sure that the top management gets involved in the improvement/innovation processes.

2. The implication of TQM

2.1. Innovation

"Seeing what everyone sees but thinking and doing what no one has thought or done". The creation of a more effective process, people, products, and ideas is the core concept of innovation. In business, it could be the implementation of such new ideas with a view to improving services to create much desired and dynamic products. Simply put, innovation is the process of introducing something new, a catalyst to enhance performance. It is said to be a broad, complex, diverse, and unpredictable force in business [13, 14].

We are aware of hundreds of innovative products that were not there a few decades ago. Those who were brave enough to innovate survived. Others, especially the meek, lost out and went into oblivion. The introduction of photocopiers, quartz watches, electronic photography, synthetic rubber, artificial textiles, right down to fast food, mobile phones, and the internet are all innovations which were adopted and became 'must have' necessities. Flying cut travel time, and low-cost airlines brought air travel to the man on the street. Now the rich are experimenting with space travel, which five decades ago was the sole monopoly of the United States of America and Russia.

With regards to the types of innovation, Schumpeter [15] listed the following: new products; new methods of production; new sources of supply; the exploitation of new markets; and new ways to organize business. There are many benefits of innovation [16, 17, 18], and some of these benefits include:

- a. **Range of products:** Building a range of products rather than a one-product business will benefit from innovation. Innovation and the introduction of many products will bring in high sales volume and revenue.
- b. **Improve quality:** Customers' needs are met by better quality products and services. This translates into more sales and higher income generated.
- c. **Productivity improvement and cost reduction:** the cost of production will drop with the improvement in production capacity. An organization looks to enjoy economies of scale.
- d. **Increase staff morale:** This will result in a willing staff team who are also easy to be retained. Many are attracted to innovative business outfits. Improves employees' communication thus enhancing top down and peer relationship resulting in job satisfaction.
- e. **Legal requirements:** as in the case of businesses which by their nature, emit smoke, polluted water or chemical emissions, environmentally friendly production methods and such outer mandated requirement calls for innovation.

On the flip side, there are a few risks or disadvantages to innovation [19, 20, 21]. As innovation is a "constant," the process requires a business to invest in research and development. Additionally, financial resources are required to market the new product or service. Innovation is new as long as an organization's competitors do not get the 'recipe' of the invention. For example, Coca Cola (recipe locked in a bank vault), had strong competition from Pepsi Cola [22], a close substitute which managed to capture a formidable market share. It is hard to protect new products or innovations, more so in this digital age where information is leaked with a click of the mouse and at an unimaginable speed, albeit

the laws of the land. Hence, innovation must be linked to a continuous improvement process. Innovation might not bring in the expected returns vis-a- vis capital invested in the item. Competitors may also seize opportunities to strike when the innovation process is stalled.

2.2. Management of Change

There is a saying mentioning that the only thing that does not change is the word "change". What then is organizational change? Change is any alteration undefined in the work environment that affects the ways in which the employees must act. These changes may be planned or unplanned, positive or negative, strong or weak, slow or rapid, and stimulated either internally or externally. Crawford N. in BPIR.Com Limited [23] opines that 'Change management is the process of managing transformational changes which affect the culture, structure, and performance of an organization.' As can be seen, change is almost endemic, and there is a critical need for organizations to change in order to face global competition, ever-changing customer demands, embrace technological change, and comply with new laws in the country of business.

2.3. Customer satisfaction

Customer satisfaction is a subjective term and has gained an increasing amount of attention in recent years from various stakeholders, including researchers and practitioners. According to Yu-cheng Lee et al. [24], customers should be managed as assets and that customers vary in their needs, preferences, and buying behavior. Understanding customer satisfaction dimensionally, measuring it and taking advantage of such information collected becomes the urgent need of management. Customer satisfaction leads to customer loyalty and customer buying trends. High customer loyalty and enhanced reputation are associated with customer satisfaction [25]. There are other factors too, like personal preferences, peer pressure to purchase, or social factors, but customer satisfaction is more important to loyalty formation.

It is therefore not too difficult to fathom that customer satisfaction, leading to customer loyalty, is the goal of every business organization. It must be noted that many businesses paid scant attention to customer service and satisfaction in the years before 1990 [26, 27]. Customer satisfaction has been described by Giese and Cote [28] as being emotional, cognitive, and/or reaction-reactive. It is based on the product/service purchase, consumption practices and/or organization-related attributes, and may be experienced before the product/service selection, choice of consumption, and usually after a long experience of using it. In these competitive times, customer satisfaction is paramount to all organizations. For this reason, customer satisfaction feedback should be documented, analyzed, evaluated, and acted upon. "Customer is King," as the adage goes, and people buy "why you do it" rather than "what you do." In 1890, M.K. Gandhi remarked that [29]:

"A customer is the most important visitor on our premises. He is not dependent on us. We are dependent on him. He is not an interruption of our work. He is the purpose of it. He is not an outsider of our business. He is part of it. We are not doing him a favor by serving him. He is doing us a favor by giving us the opportunity to do so."

Business organizations need to understand that the implementation of customer satisfaction policies is an important tool to develop strategies for the maintenance of customers and create loyalty towards the company. All the promises and efforts of a business to enhance customer satisfaction and loyalty will be equated with the projected investments in a comprehensive customer satisfaction system. This may be a technological tool or a total change in the culture of the company.

3. Conclusions

This study is particularly apt in relation to current, ever-changing situations. This is not only due to the innovations around us or the demands of customers, but also to the current environment and global

pandemic. Many researchers have found that the relationship between TQM and business performance in relation to product quality and customer satisfaction has received a considerable degree of attention [30]. However, after the introduction of TQM, the competitive advantage gained by a business by the introduction of this strategy is inconclusive [31].

The ultimate goal of any business organization is to create and enhance customer satisfaction using TQM techniques. According to Mohsan et al. [32], organizations are increasingly establishing strategies to determine and ensure customer retention, as well as charging their employees to be more customer-focused and service-oriented. Customer satisfaction is vital to bringing about loyalty because a satisfied customer is expected to stay loyal to the company for a long period of time and buy more and often than others. The introduction of TQM has proven to reduce costs and increase the all-round performance of the company [33]. The cost of failure will be reduced by TQM, and this again promotes the products and services of the business or company to satisfy the customers. Earlier research has also found that when TQM is implemented, service quality must be continuously monitored and maintained [34]. There was an all-round improvement in communication at all levels, with frequent management meetings. Management also organized various on-the-job training programs and workshops relating to TQM, and these activities in turn translated to a more efficient work force. Increased attention to customer satisfaction has led to improvements in the economic performance of companies.

TQM practice is a strategic option that can enhance viable performance outcomes, giving competitive advantages in the marketplace [35]. International organizations adopt innovation and technological changes to maintain their competitive advantage and, in fact, to survive [36]. Although technology transfer performance had a positive and strong effect on TQM, no significant direct relationship was found between technology transfer performance and quality performance [37]. Successful TQM implementation requires major changes in knowledge management like creating storage, sharing, and applications [38]. There is an emphasis on the participation of employees in knowledge sharing, which affects the quality culture of the enterprise negatively [39]. To be successful in the implementation of TQM, it is necessary to have the support of all employees and the willingness to cooperate with other teams. Total Quality Management can be advanced if all divisions of an organization use advanced, sophisticated methods in keeping with industrial development 4.0, as this strategy will give specific advantages to reach the global markets.

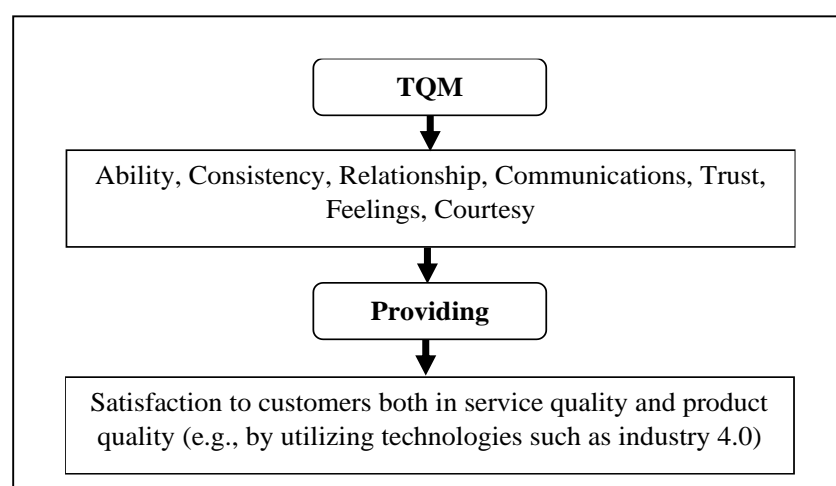


Figure 1. The effect of TQM implementation on a business

Figure 1 depicts the procees of the effect of TQM implementation on a business. The use of technology, including Big Data, Cyber Security, Cloud, Robotics, and strategies to enhance and

strengthen the manpower resources able to interact and harness such resources, will be beneficial to the organization.

In a nutshell, TQM can help to promote customer loyalty and satisfaction. Most companies try to satisfy their customers' needs and expectations, which can only be achieved through improvement in product quality, increased customer satisfaction, and continuous improvement. A highly satisfied customer is expected to stay loyal longer, increase their purchase quantities over time, buy as the company introduces new products or upgrades existing products, talk favorably about the brand, show less sensitivity to price, pay less attention to competing brands, and generate new product and service ideas for the company [40].

In summary, earlier studies conclude that any company that implements TQM will have at least 1 of the 8 TQM principles enshrined. These were leadership, people and process involvement, approach management, continuous improvement, factual decision making, mutually beneficial supplier relationships, and a customer-focused organization.

Business and industries range from little kiosks to huge conglomerates, dealing in anything from pins to pianos, air balloons to airplanes, and it is an endless list. Invariably, all deal with the customer as the ultimate end user. Large multi-national companies invest large amounts of money in research and development and also in the latest information technologies to enhance their operating capabilities. Small businesses, on the other hand, do not have such options or resources at their disposal and are therefore hampered in their endeavors. Therefore, any generalizations of the findings of TQM studies could be flawed, and this has to be borne in mind too.

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