

Implication of Total Quality Management Concepts in Service Organizations

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Abstract

This paper studies the feasibility of total quality management (TQM) approach in service operations systems and its outcomes as well. Service operations merit a considerable attention because they form a huge part of an economy and have characteristics that differentiate them from goods manufacturing operations. Contemporary approaches (e.g. JIT and TQM) which formed originally for manufacturing operations require investigation for implementing in service operations, for guaranteeing the results. In this study, we investigated, via a meta-analysis of previous researches, the feasibility and outcomes of this quality approach in the service operations (e.g. educational services ...). The results showed that the TQM could be useful quality instrument, off course with some considerations. Moreover implementing TQM in service operations brings some useful results, which can be articulated via such variables as job satisfaction, organizational confidence, and quality of relationships. With the importance of the human factor in service operations, the mentioned variables would play a bold leverage role in enhancing quality in service operations. Experimental analyses showed that the initial hypothesis that there is a relationship between the implementation of total quality management and job satisfaction, organizational confidence, and the quality of relationships, in the organization studied.

Keywords

Total Quality Management, Operations, Services, Feasibility, Outcome, Quality

Introduction

Total Quality Management (TQM) as a managerial philosophy, has found its position in societies with a rapid speed. This philosophy has put quality in service providing in its focal point because of the importance customers' needs and initiatives in the service industries. Focusing on quality and endeavor for a continuous improvement, has a fundamental role in quality development. The management systems have evolved rapidly in recent years. Simple checking activities have replaced or completed with control mechanisms (Hematinejad, 2012). The organization has to correct and improve the methods through a comprehensive management of the organization. The quality of processes in an organization is a key determinant of the success of a service organization.

TQM is considered as one of the development factors in a work environment that helps organization providing better services, and creates a competitive advantage as well as enhanced productivity. Recent evolutions brought a considerable development of the service sector such that a huge labor force will be hired by this sector as per the forecasts. On the other hand, today's competitive environment evokes the organizations to manage their resources well and equip with up to date

scientific properties. In this combat, the TQM is considered a powerful instrument for attaining the competitive advantage that improves goods and services and can be implemented in a service organization (Zakizadeh Nini, 2016). Many authors believe that the quality of products and services is a key for competitiveness in the free markets. Hence, the managers of the organizations try to find approaches through which achieve the maximum quality and customer satisfaction while maintaining economic efficiency and equilibrium in costs. Total quality management is one of managerial performance experiences that has got increasing attention during recent decade. This is an integrated managerial philosophy that focuses on continuous improvement on performance, products, processes and services in order to obtain and enhance customers' satisfaction (Bagherabadi, 2016).

Since the TQM focuses on reward instead of punishment, and pursues quality improvement in a multi-dimension approach, it paves the way to a more proper planning for driving the operational system goal. Many factors can be mentioned in advancing the organization's goals including the role of total quality management, job satisfaction, organizational confidence, and relationship quality. This study aims at investigating the applicability of TQM in the service operations and its results.

Problem Definition and Research Objectives

Nowadays quality improvement is a necessity in all service sectors such as health, education, etc. This attention to the quality of services gets more importance in the public services, because of continuous reduction in budgets, relatively low level of knowledge, and the skill of employees in this sector and people resistance and government requirement for a wide reconstruction or improving service systems. Increasing actions that is taken worldwide on autonomy of management, valuation of initiatives of managers and empowerment, can be considered as some signals of this attention. In this situation, service management specialists regard TQM concepts – with some modifications – as a vital instrument for reconstructing service systems (Alagheband, 1995).

Since the outcomes of such plans as TQM realize with a relatively long time and so the achievements cannot be felt rapidly and they have lower attractions in the service operations relative to the production sector, there may not be a high motivation for this initiative. Although TQM was originally designed for good production but now is introduced to service sector and becomes a pattern for quality management in services. Managers come to recognize that this system can be implemented in every organization proportional to its factors. Service sector that constitutes a vast part of the economy is not an exception. TQM implementation can result in not only a reinforcement of total performance and creation of competitive advantage, but also an increased employee participation, improved relationships, higher productivity, and customer satisfaction (Bagherabadi, 2016).

One of the main factors in services is service providing. The more proper confrontation of the employees with customers, the more effect on customer's satisfaction will be there and the operation organization will succeed in realizing its main goals (shemmari, 2013).

This study investigates the effect of TQM implementation on service organizations. Its goal is finding the effect of TQM implementation in the service sector, so that we can help managers and decision makers in selection and implementation of this management instrument. The result will be a maximum quality and an evolution in the service organizations.

Literature Review

Total Quality Management, is an effort towards an improvement in processes, productions, services, and all organizational activities in the way of satisficing customer needs, reinforcing competitive leverage, and achieving to an optimum level of doing the job in a changing environmental conditions (Zomorrodyan, 1997). TQM is a managerial and humanistic theory, since its basis relies on customer's satisfaction and the key to the success of TQM is "human". Based on this theory, human would be empowered and helped to attain required skills, instead of being forced to work. It is a technique for participation of all employees and managers in the organization's affairs. The employees need to be trained to do the job with required format and discipline (Zakizadeh, 2016).

Researchers and experts have proposed various definitions on the Total Quality Management. This definition is debatable since the issue is how to give an integrated definition on the subject (Lau, R.S.M., Anderson, C.A,A 1998). TQM is a managerial philosophy that tries, via continuous improvement methods, exploit available opportunities and resources for quality improvement with taking customer satisfaction as a principle. Customer here is not only the buyers, but also service receivers, as well as the employees in all internal departments (Torbica, Z.M. and Stroh, R.C, 1999).

Organization is a series of ordered and logical relationships that are set for achieving common goals between persons who have various duties since the number of these persons is so many that cannot contact each other directly. Robins defines job satisfaction as general view of an individual about his/her work. He believes that a person with a high job satisfaction would have a positive view regarding his/her job.

Research results show that the persons with more satisfaction of their job are in a better situation mentally and physically relative to others. Job satisfaction is a positive and desired emotional state which can considerably help people physically and psychologically (Hosseini Darjani, 2009).

Organizational confidence as an inter-organizational phenomenon refers to the confidence between employees and supervisors or managers on between coworkers. This concept was under attention since 1980 decade to 1995. During decades, this phrase has been studied from different viewpoints. Luis (2007) believes that confidence actually is our belief that others do the same act that are expected to, without being under monitor or control. Many researchers believe that confidence is generally assurance and optimism regarding occurrence of events, or assurance on others, without coercive reasons. Quality of relations refers to the manner of behaving and respecting social situations and people or groups that cause these situations. In well-organized human relations there is no race difference, social class or economic and cultural difference, but respect to person's personality and human values is important.

Previous Studies

Ajalli et al. (2017) did a study titled "An explanation of the barriers in implementing TQM with a combined fuzzy approach" in gas industry as a service organization. After identifying key barriers in a successful implementation of TQM in gas industry through literature review and experts' survey, five main barriers was identified. The results showed that barriers related to human resource was the most effective barriers that merit attention. As per the proposed model an action plan for confronting the barriers of a successful implementation of TQM in gas industry would be provided.

Zakizadeh Nini (2016) in her dissertation titled "a study on the relationship between TQM and job skills proliferation among accidents experts form the viewpoint of chiefs of 22 regions of big Tehran police" concluded that there is a positive and direct correlation between TQM parameters and job skills proliferation of the accidents experts also among TQM parameters and better handling the accident environment index, citizens satisfaction regarding an on time action about an accident, proper behavior of the officers with the customers, and training programs.

Shabani et al. (2016) in a study titled "investigating the relationship between TQM and service quality in the insurance companies of the Gorgan town" concluded that there is a significant relation between the two TQM dimensions including leadership and focusing on customers with service quality in the insurance companies of this town.

Shams et al. (2015) studied the relation of different dimentions of organizational confidence with job satisfaction of Mazandaran province employees. The results on the main hypothesis clarified that there is a positive significant relation between organizational confidence and job satisfaction. Also the results obtained on sub-hypotheses showed a positive significant relation between different dimensions of organizational confidence (horizontal, vertical, and institutional confidence) and job satisfaction. Moreover there were a positive significant relation between all dimensions of organizational confidence with each other and with all the aspects of job satisfaction.

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Romzi et al. (2015) in their research on "implementation of TQM in service organizations and improving their performance" via studying literature concluded that implementation of this concept in industry was neglected considerably and most of the studies in the literature, were conceptual or case study. Supportive role of top management and its commitment to the success of TQM is necessary and a quality culture is one of the main factors in the success of TQM in organizations. Most of the studies investigate the relation between TQM methods and organizational performance. Although the focus is on the implementation of TQM strategy in production organizations, but that is equally applicable in the service industry.

Shafiei (2008) in a research titled "TQM in service organizations" concluded that the TQM is one of the contemporary approaches provided in recent decades. Fundamental principles of TQM include teamwork, continuous improvement, employee's participation and focus on customer. Applied at first for goods production and being the subject of a wide range of studies for this sector, there are limited studies about TQM was the on applying this approach in service sector. They look at these two fields the same, but having the differences and clear contradictions between these two sectors, applying the approach in these two requires different prepositions and principles. The results showed that applying TQM in services requires different prerequisites compared to goods production because of different concept of quality in services.

Firoozyan and Gholipour (2007) in pursuing a conceptual model of measuring requirements of realizing TQM in organizations and its relationship with customers satisfaction, declare that realization of TQM as a culture and a set of strategic principles for continuously improving it in organizations, requires institutionalizing Deming's principles as three principal features (commitment, scientific knowledge, and involvement). As per their conclusion, the "scientific knowledge" variable shows the most effect and other variables as "involvement", "leadership", and "commitment" is the next effecting variables.

Hoseini Darijani showed through a research that there is a significant direct relationship between empowerment and self-efficacy of managers. Existence of this relationship increases managers' power in accepting responsibilities, decision power, and creating a feeling of confidence and flourishes innovative ethical students and brings job satisfaction. Findings show a positive correlation between the variables that was investigated through regression equation; empowerment and self-efficacy represent a relation with job satisfaction. These two variables can commonly justify 27 percent of the variations of job satisfaction.

Seyedfatemi et al. (2016) in their research, "critical factors for TQM in service organizations" concluded that the success of service organizations for applying quality management systems depends on identification and analysis of critical factors. Researchers identified many critical factors for TQM in services; five critical factors has been proposed for TQM in service organizations. These can be a guide for these organizations in providing a plan for implementing TQM in their organizations in understanding critical regions.

Herishanra Parsuram (2015) in their research on "TQM as a part of services considering India's conditions" concluded that employing TQM in the service sector of India ought to be based on practical judgement. Indian organizations would correct it whenever needed so that adjusts internal and external customers. Transparency in execution and gap of the existing methods should be considered.

Kanj Boon Avi (2011) through his research founded that there is a relation between TQM methods and service quality also between TQM methods and perceived satisfaction. Research results in small firms in Malaysia showed that only three parts of six dimensions of TQM method exists (i.e. leadership, customer focus and information analysis) and to some extent benefits from a positive effect on customer satisfaction. On the other hand two other actions, that is customer focus, and information analysis relate to service quality significantly. Findings revealed that TQM actions significantly relate positively relate to customer satisfaction and services.

Pickard (2006) in a research about TQM and organizational development concludes that prerequisite of success in TQM is the participation of all members of the organization towards introducing the new program, techniques, and system. Most of the employees from low levels and high

levels of the organization, can propose big useful ideas in this field. He believes that TQM in public and service organizations can be executed and the main condition of success of installing TQM in these organizations is that a modified model fitted to conditions and requirements of each organization exerted.

Balodin (2002) believes that about implementing TQM in an organization, managers should not see themselves capable of implementing it in all organizations, since conditions governing organizations are different and each correspond to one or some executive techniques of TQM, so before everything the proper technique can be selected through evaluating their existing conditions and then the TQM implemented.

In a questionnaire-based research performed in 72 Spanish service companies, exerting two measurement models, the performance outcomes from TQM were classified; the first model encompassed the TQM practices, and the second, included the performance outcomes. Applying exploratory factor analyses, the latent factors were extracted. The TQM factors discovered by this research included the top management quality practices, employee quality management process management, employee knowledge and education, and customer focus. The performance outcomes dimensions include financial performance, product/service quality performance and operational performance and customer satisfaction. In this research project, adopting TQM in service companies is investigated by determining specific factors of TQM and its performance outcomes as well (Jaca & Psomas, 2015).

Approach to TQM was seriously taken place on 1370 in Iran. Industrial institutions were progressive in this field but we witness some efforts towards implementing this system in service and educational organizations too. Given the path undertaken in this field, it seemed useful to perform a research on the possibility and outcomes of implementing TQM system in educational service system. This study formed for paying attention to this gap.

The Conceptual Model



Figure 1. Conceptual model of the research

Research Questions and Hypotheses

As per the research objectives, the research questions are as follows:

- Whether TQM is applicable for service organizations or not?
- What will be the outcomes of implementing TQM in service organizations?

Hence, the following hypotheses set fourth for this research:

- TQM is applicable in service organizations.
- Exerting the TQM approach in service operations will be effective.

Discussion

This study is an applied research with a meta-analysis method. We aim at investigating TQM concepts in service organizations via a meta-analysis method and probe the relation of TQM implementation with such variables as job satisfaction, organizational confidence, and quality of human relations. For this study, articles from different domains were used including health and remedy, industry, education, and other public services such as standard. Since the aim in this study was to investigate TQM concepts in service organizations it was revealed, through probing TQM procedures in selected researches, that these procedures were employed with different methods in each article. Given the multiplication of the terms, it seemed that the results obtained from the articles could not be aggregated into unified indices, while concentrating on the principles of quality management used in the articles and the concepts considered in them, it was clarified that they can be integrated easily and common concepts can be distinguished among them.

Hypothesis 1: TQM is applicable in service organizations.

Hypothesis 2: Exerting TQM in service operations would be effective.

37 articles were selected for meta-analysis. Majority of these 37 selected articles, were related to services. Investigating the implementation trend revealed that production and service organizations increasingly regard customer satisfaction as a main factor of measuring their work quality. As is seen in the Malcom-Baldrige national award, around 30% of total scores is determined by customer satisfaction. TQM has a similar approach to this. Previous research verifies the results.

Service Sector

The goal of TQM was creating a cultural organizational evolution. This is realized through people power and finally results in group work, increased moral, improved organizational culture, and profit as well. Hence TQM is crucial both for services and goods production (Alvani, 2003). Implementing TQM results in better quality of services compared to competitors and increases market share and profit. Reputation in quality would provide permanent customers for the organization that is less under market fluctuations. This attracts qualified persons to the organization. Because of the relationship of the quality and productivity, quality improvement results in an increase in production, cost diminishment, better wage, and promote to more proper positions and moral enhancement. And finally cultural evolution that is the objective of TQM, helps the service sector to pay attention to the customer needs with a better manner and so organization's niche among customers strengthens (Ryahi, 2002).

Total Quality Management in Service Organizations

Quality of services has been one of the most important subjects studied and many researchers studied and evaluated service quality in different sectors. For instance, subjects such as measuring service quality, the relationship between service quality and customer satisfaction and financial outcomes of service quality in recent decades has been under attention of researchers. But in this way, few studies have been devoted to investigating the TQM concept in service organizations. This may be because the researchers think that instruments, techniques, strategies, and TQM factors in production organizations can be exerted in services similarly. Despite this imagination, the results and findings of performed studies in production organizations cannot be exemplified directly in the service organizations, because the fundamental intrinsic differences and contradictions exist between service and production organizations. Services encompass characteristics that differentiate them from goods. Different features of services should be considered in service marketing that include (Roosta, 1999):

1. Intangibility of services: Service can't be seen, touched, or sensed before buying. The main task of marketing is to make services so tangible or show their benefit and application.
2. Non-similarity and non-continuity: Quality of services is often different and non-continual. Services depend on individuals who provide them. Hence, their quality is variable, because individuals merit various capabilities and even different performance. Service affairs may be good or bad in quality. Quality of products has got more continuity and durability by employing

- sophisticated production lines, but services are always variable. A group that has performed so good and successful in one week, may get lazy, weaken, or non-willingness for few days later.
3. Inseparability: often consumers not want and not can separate service from its provider and the situation and condition of service. For instance, the student gets present in university. The quality of education may be high but when by-services such as consultation, group activities, book-keeping, restaurant, and parking are improper or weak, the student can't be satisfied and happy with this educational experience.
 4. In-storability: storing services and products are different. For services, cost of storage and holding a service equals the cost of the person who provides the service plus any kind of instrument he needs to provide the service.

Lack and Mohanita (1995) consider some characteristics for service organizations that differentiate them from production organizations. These include:

- 1- Service organizations usually produce services that may be tangible or intangible and sell them directly to customers.
- 2- Service organizations in realizing their mission create multiple communications with their customers. Each of these contacts may result in a service with good or bad quality.
- 3- Service organizations should be ready to provide their service at the time that the customer needs. Customers consider on time accessibility to services and accountability is the primary goal for them.
- 4- Services are not storable and transportable. Hence their benefit is realized just at the time of delivery.
- 5- Many services include delivering intangible products too.

These characteristics make services different compared to physical goods and the strategies and activities in services are different. One of these differences is in quality. Quality in services is totally different compared to goods. So quality requirements and approaches undertaken in these two sectors are totally different. One of the quality approaches that is under attention today is the Total Quality Management that, considering the differences of the two sectors, merits special attention in applying for services.

Saresh Chander et al. (2001), via a study, identified 12 dimensions for applying TQM in service organizations that include:

1. Commitment of Top Management and provisional Leadership: this is a prerequisite for applying TQM effectively and successfully. Provisional leadership is responsible to create a long-term vision for organization development, diffuse this vision all over the organization, create an operational plan for achieving this vision in organization, and finally motivate all in organization to reach this vision. Top managers for possessing commitment regarding the continuous improvement should have knowledge, information, and perception needed on the principles and concepts of TQM. Qualified leadership creates judiciary services in which operational complexities, external pressures of market, or other potential resistances that may confront TQM are controlled.
2. Human Resources Management: Human resource is the most important property of every organization. This is specially focused in the service organizations since this is the interaction between service providers and the customer that determines customer's perception on quality and his/her satisfaction. In all service organizations, human resources are one of the factors to achieve durable competitive advantage. Hence, service organizations augh to exemplify some organizational actions including selection and recruitment, training, employee empowerment, and participation in quality programs.
3. Technical system: this system includes design quality management and process management. Service design is one of the important dimensions of quality. Correct and proper design of services for meet or advance needs, desires, and utilities of customer and finally enhancing organization's performance in crucially important. Zimel et al. argues that for a successful and effective designation of quality in services domain, it is needed not only be aware of customer

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desires and needs, but also understand service complexities. Service process management is not necessarily related to the procedures, systems, and technology of service providing, but human factor has a considerable role in this field; non-human element of service providing and human element need to be systematized so that it achieve a simplification that the customer can easily get services.

4. Information and analysis system: for the sake of effectiveness of quality management, traditional information systems that concentrate on financial accounting, sales, marketing, and purchase activities costs are not sufficient. Service organizations customers have to be fully informed about processes and customers.
5. Comparing to best organizations: is a way on which there are many discussions in books and articles. An organization can achieve to world class when accept measuring criteria as a key process. Exploiting standards in service organizations is difficult. Because of complicated nature of services and different organizational conditions that require its own design, production, delivery, and consumption, organizations not only should concentrate on hard data, but also on behavioral characteristics as customer and employees satisfaction.
6. Continuous improvement of productions & service system results in a continuous improvement of quality and productivity and this finally results in a continuous reduction in costs. Continuous improvement in process and quality is the most important function of TQM in service sectors too.
7. Concentration on customer: concentration on customer and its satisfaction is a principal ingredient in TQM, since the organization can, through a correct and effective attention to needs, expectations, and desires of the customer and proper response to them, advance its competitors. In production sector, organizations can, exploiting superior technology, produce products, which correspond the customer's requirements and desires and possess features like durability and aesthetics and motivate customer to select this product. In service organizations, since customers' expectations have a dynamic and complicated nature, service provider should have a different view regarding customers' expectations. Customer satisfaction should be the final goal and criteria of service quality (malikovich, M.E, 1995). Today maybe achieving customer satisfaction is not sufficient but it should achieve customer enjoyment. This may be realized by more participating customer in the service providing process. In this way, organizations should look at the customers as a part of their human resources or organizational consultants. Organizations that look at their customers as only final consumers, will fail in competition with organizations that participate their customers in service providing affairs. Organizations should identify their customers' expectations based on various researches and investigations and set their quality programs as per them.
8. Employees' satisfaction: This show how much the employees of an organization believe that their needs and wishes are satisfied continuously by the organization. One of the main factors in employees' satisfaction in organization is the payment method. Management should assure that organizational rewards guide employees towards endeavor to achieving organizational goals. Employees' perception on equal fair behavior with them in the organization is another factor of employees' satisfaction. Fair and equal behavior in service organizations shows more effect on the organizational effectiveness. Managers in such organizations need to pay more attention to these issues. One can declare totally that an organization should not only focus on customers' satisfaction and service quality, but also on employees' satisfaction. Research shows that there is a strong relation between employees' satisfaction and customer's perception of service quality and customer's satisfaction.
9. It is an approach that is executes all over the organization and its success depends seriously on unity and participation of the employees. Employees' relation affects organization's system and so determines the nature and the context of the work.
10. Social responsibility: while the main goal of every organization is to get profit, at the same time it should grow and obtain a proper face in society. For this, the organization needs to realize its

social commitment. Research show that customers' perception on the quality of service is not only based on the features of the service but on organization's reputation.

11. Service environment: while the relation between customer and service provider is of importance, but physical environment of service providing effects customer behavior and creates an image of organization and its employees in customers' minds. Physical aspects of services also affect customer's perception on service quality. A service is consumed at the same place of providing, hence it is not possible to hide service environment from customer. Environment of service affects customer's perception on service experience considerably. Meanwhile the customer considering physical condition of service organizations searches for a proper service provider prior to receiving service. Therefore service providing environment and apparent conditions of employees in service organizations should be so that attract customers primarily and satisfy them.
12. Organizational culture: organizational culture enables people to have a common vision about the organization and its goals. It leads various organizational activities towards a common goal. And organization with a proper service culture can probably better satisfy customers' needs and desires continuously and convey confidence and assurance in service providing to them.

Application of Total Quality Management in service and production organizations

As an evolutionary managerial philosophy that helps organizations in solving many problems, TQM is rapidly implemented and applied on organizations. Moreover, the principles of TQM are applicable in service organizations too, although the notion of quality management in production environments. There are some differences; the clearest difference between the two sectors, as Almansour (2007) considers is intangibility of services. Moreover, measuring quality of products against standards of quality and specifications is easier compared to services that are intangible, less homogenous and difficult to measure. Many studies in TQM literature was through comparing with goods production industries. In an experimental study on 261 companies and 85 service organizations, Bimont et al. (1997) and similarly Ven (2000) who surveyed 240 companies in Singapore, was revealed that service organizations use TQM in a lower level. These studies specially revealed that while soft factors of TQM such as leadership, focus on customers and human resources management are applicable similarly in services and goods production, but hard TQM factors like process and information management and analysis, are more applicable in production organizations than in services.

Applying TQM in service sector primarily results in a better quality relative to competitors and increases market share and profit. Secondly, reputation in quality provides permanent customers for the organization less affected by market variations. Third, TQM attracts qualified persons to the organization. Fourth, because of the relation of quality and productivity, quality improvement results in production increase, cost reduction, better wage, and promotion to more proper and moral enhancement and finally this cultural evolution that is the goal of TQM, helps service sector to better concentrate on customer's needs and therefore the position of organization strengthens among customers.

Experimental evidence

Here, we present an experimental study on the subject. This research is applied in terms of aim and is a descriptive-survey in terms of nature and methodology. The statistical population of this study includes administrative and educational staff of the Education Organization. In this study, a stratified-random sampling method was used. The sample size based on similar studies was selected to be between 100 and 130 items, for which 130 questionnaires were distributed, and after excluding incomplete and inaccurate questionnaires, 111 were finalized and entered into the software.

In this research, first, using library studies and Internet resources, the theoretical foundations and background of research in research-related fields were studied and notes were taken. Then, standard questionnaires about total quality management, job satisfaction, organizational trust and relationship quality were extracted and used.

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Data analysis in the present study was based on inferential statistics and the data analysis tool was SPSS software. Linear regression was used to examine the relationship between independent variables of TQM and the dependent variables of job satisfaction and organizational trust and relationship quality.

Findings

The collected data were statistically analyzed through questionnaires entered into SPSS software. The results extracted from statistical analyses were used to answer the research questions as well as to confirm or reject the hypotheses.

Hypothesis 1. There is no significant difference between TQM implementation and job satisfaction in the Education Organization.

To investigate the relationship between total quality management and job satisfaction, linear regression was used, the results of which are extracted in the following tables.

Variables Entered/Removed ^b			
Model	Variables Entered	Variables Removed	Method
dimension0 1	TQMa	.	Enter

a. All requested variables entered.
b. Dependent Variable: Rezayatshoghli

Table 1

Table (1) shows that TQM is included in the regression equation.

ANOVA ^b						
Model	Sum of Squares	df	Mean Square	F	Sig.	
1 Regression	2862.190	1	2862.190	23.296	.000a	
Residual	13514.917	110	122.863			
Total	16377.107	111				

a. Predictors: (Constant), TQM
b. Dependent Variable: Rezayatshoghli

Table 2

ANOVA test (Table 2) was used to examine the initial hypothesis to indicate if there was a significant difference between total quality management and job satisfaction. The results of this table show that: because sig = 0.000, there is a significant difference between TQM and job satisfaction in the organization.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
dimension0 1	.418a	.175	.167	11.084

a. Predictors: (Constant), TQM

Table 3

According to Table 3, it is observed that 18% of the total changes in job satisfaction are expressed by TQM.

Coefficients ^a						
Model		Non-standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	64.400	2.370		27.175	.000
	TQM	.112	.023	.418	4.827	.000

a. Dependent Variable: job satisfaction

Table 4

In Table 4, the standard coefficient and t-value are calculated. According to this table, TQM is the cause of a significant part of the standard difference (variance) in job satisfaction. For each standard deviation of change in TQM, 0.42 standard deviation of change in job satisfaction will occur.

Therefore, the initial hypothesis that states there is no significant difference between the implementation of total quality management and job satisfaction was rejected. And there is a significant difference between TQM and job satisfaction in the organization of the research statistical population.

Hypothesis 2. There is no significant difference between TQM implementation and organizational trust in the Education Organization.

Variables Entered/Removed ^b				
Model		Variables Entered	Variables Removed	Method
dimension0 1		TQM ^a	.	Enter

a. All requested variables entered.

b. Dependent Variable: organizational trust

Table 5

Table 5 shows that TQM is included in the regression equation.

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ANOVA ^b					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	52320.901	1	52320.901	67.672	.000 ^a
Residual	85047.590	110	773.160		
Total	137368.491	111			

a. Predictors: (Constant), TQM
b. Dependent Variable: organizational trust

Table 6

ANOVA test shows that: the difference is significant because sig = 0.000, so there is a significant difference between TQM and organizational trust in the organization.

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
dimension0 1	.617 ^a	.381	.375	27.806	

a. Predictors: (Constant), TQM

Table 7

According to the table, 38% of the total changes in organizational trust are explained by TQM.

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	101.889	5.945		17.139	.000
	TQM	.477	.058	.617	8.226	.000

a. Dependent Variable: organizational trust

Table 8

In the table, the standard coefficient and significance of t - value are calculated to show the strength of the relationship between TQM and the quality of relationships. According to this table, TQM causes a significant part of the difference in criteria (variance) in the quality of relationships. For each standard deviation of change in TQM, 0.62 standard deviation of change in the quality of relationships will occur.

Variables Entered/Removed ^b			
Model	Variables Entered	Variables Removed	Method
dimension0 1	TQM ^a	.	Enter

a. All requested variables entered.
b. Dependent Variable: quality of relationships

Table 9

Here, the hypothesis that states there is no significant difference between the implementation of total quality management and organizational trust is rejected. Because there is a significant difference between TQM and the quality of relationships in the organization.

Hypothesis 3. There is no significant difference between the implementation of TQM and the quality of relationships in the education organization.

Here, also, it acts similar to the previous two hypotheses, and the following results are obtained. The table shows that TQM is included in the regression equation.

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3586.286	1	3586.286	38.448	.000 ^a
	Residual	10260.277	110	93.275		
	Total	13846.562	111			

a. Predictors: (Constant), TQM
 b. Dependent Variable: quality of relationships

Table 10

ANOVA test shows that: the difference is significant because sig = 0.000, so there is a significant difference between TQM and the quality of relationships in the organization.

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
dimension0	1	.509 ^a	.259	.252	9.658

a. Predictors: (Constant), TQM

Table 11

According to the table, 26% of the total changes in the quality of relationships are expressed by TQM.

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	46.577	2.065		22.557	.000
	TQM	.125	.020	.509	6.201	.000

a. Dependent Variable: quality of relationships

Table 12

In the table 12, the observed standard coefficient and t-value are calculated to show the strength of the relationship between TQM and the quality of relationships. According to this table, TQM causes a significant part of the standard difference (variance) in the quality of relationships. For each standard deviation of change in TQM, 0.51 standard deviation will occur in the quality of relationships.

Therefore, the initial hypothesis that there is no significant difference between the implementation of total quality management and the quality of relationships is rejected, because there is a significant difference between TQM and the quality of relationships in the organization.

Conclusions and Further Remarks

Study on the effects of implementing TQM in service organizations revealed that this quality approach, which is primarily formed for production operations, can be applied, with modifications, for service operations too. Its outcome would be desired quality results that demonstrate themselves in variables such as job satisfaction, organizational confidence, and the quality of relations; these variables especially in service providing operations in which the role of human factor is so high, shows a considerable leverage effect on quality: TQM increases job satisfaction and provides better work conditions for individuals through organizational confidence. Also constructing more qualified human relations, results in enhancing performance of human factor, since in the service providing systems direct contact of customer with service provider causes special

importance of this variable. Findings reveal that TQM principle merits more research in the service providing systems.

One of the recommended research domains is investigating the importance of each TQM principles in different service fields. Also studying comparatively the effect of this managerial approach in different cultures is suggested; since it may, because of Japanese root of the approach, cultural variable be effective here as well. We believe that there are constraints that should be considered in future research. First, g services is subjective to some extent and based on indices such as gross domestic production, employment rate, annual salaries, and the importance of customer-perceived quality in an industry that may vary from time to time. Also actual classification of service industries depends on authors' judgement. Although a good attention is paid to, but it may be possible that an industry is missed here. Second, it's suggested that future researches regard other service organizations too in which TQM concept can enrich organization's function and performance. Third, as many of the studies have not so much experimental nature, more conceptual studies and researches for clarification and validation of the relationships between theoretical constructs that can be consolidated with practical management frameworks are needed. Fourth, future research for domains is recommended in which not so much work is done. Some gaps identified in TQM success include TQM environment, TQM in care organizations, factors in effective implementation of TQM, identification and investigating dimensions that cause implementing multidimensionality of TQM both from an internal viewpoint and external. Fifth, as per many of research studies, a probe of literature of TQM in service operations is solely limited to this study. Other researches can look at the main domains of TQM and a wider classification that may include analytical studies, and superior business frameworks in service operations. From an implementation view, service industries require a dynamic and systematic TQM approach. Such approaches should be able to measure, monitor, trace, and continuously improve different organizational performance.

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