

Analysis of Challenges to Total Quality Management Implementation in FGEIs (C/G) in Pakistan

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Abstract

The study was designed to evaluate the existing status of Total Quality Management (TQM) and to investigate the obstacles to implementation of TQM in Federal Government Educational Institutions (Cantonments/Garrisons) in Pakistan. Survey research design was adopted and data was collected from the sample subjects through a structured questionnaire. Statistical analysis was carried out in SPSS version 20. Factor analysis and regression analysis were carried out to analyze the obstacles to TQM implementation and their relationship with the potential undesirable outcomes from failed TQM. It was revealed that the most significant obstacle to TQM implementation in FGEIs (C/G) is “not linking the promotion and increments in pay with the achievement of quality goals” followed by “time constraints” and “insufficient resources to implement TQM”. The results provided an opportunity to the respective authorities to focus on the weak areas that need attention and to develop plans to overcome these obstacles.

Keywords: Total Quality Management, TQM, Challenges, FGEIs (C/G)

1. Introduction

Total Quality Management (TQM) has become one of the most popular strategies for achieving customer satisfaction and improving organizational performance in recent decades. TQM is a management approach of organizing the whole organization to improve business flexibility and effectiveness of its processes through the involvement of each and every unit of the organization (Oakland, 1989).

Education as a service is vital for any country since it not only contributes towards gross domestic product (GDP) and human resource development (HRD) but also generates revenue through other means. Education sector can be considered as a major contributor to economic growth. This sector however, could not perform well in Pakistan. At primary, middle and secondary level, the performance of government sector has been rather questionable. FGEIs (C/G) took a great deal of initiatives in the recent past to effect material improvement, TQM in education is also one such endeavor. FGEIs (C/G) system is one of the largest education provider in Pakistan. These educational institutes include primary schools, secondary schools, high schools and colleges. There are total 355 FG educational institutes distributed in various regions across Pakistan. Rawalpindi region has the highest number of FGEIs (C/G) (107) followed by Peshawar region (50) and Wah region (48).

However, the results produced by FG educational institutions are not up to the mark. The results of FGEIs (C/G) lack far behind that of private schools. In 2016, almost 34% students secured C grade or below in SSC-II examination and almost 45% students secured C grade or below in HSSC-II examination. Although TQM models have been applied to this system but their effectiveness is not satisfactory. Therefore, the hurdles in the implementation of these models need to be explored and analyzed in order to improve the quality of this entire system.

This research is needed to improve the standard and quality of education of FGEIs (C/G) and to help them compete with the private schools. This research will help the respective authorities to identify the obstacles in the way of implementing TQM and focus on the weak areas that need attention. The study aims to provide results that will prove to be beneficial to the FG Educational Institutions Directorate in making future policies and planning management.

2. Literature Review

Many researchers have attempted to provide reasons for the high TQM failure rate. Lack of top management commitment is a major obstacle to TQM as mentioned by all quality gurus. The reason behind this obstacle is lack of knowledge regarding TQM, communication gap between the employees and the top management and less engagement of management with the rest of the organization (Soltani, Lai, & Gharneh, 2005). Pheng and Teo (2004) are of the opinion that the degree of support to implement TQM provided by the top management plays a vital role for its success. Top management commitment enables employees to follow their direction and helps them to remain focused.

A workforce is often resistant to change and unwilling to embrace TQM. In most cases management pays no attention towards resistance issues of the employees and the importance of involving them in the

implementation plan (Reis & Pena, 2001). Deming was of the opinion that fear should be driven out and an environment of trust and confidence should be created. Absence of sound strategy is another challenge to TQM implementation. Oakland (1989) stated that the pre-planning stage which is concerned with the development of level of awareness and the right attitude is vital for successful quality improvement program. Often top management fails to understand that poor planning leads to a project that costs more and takes longer time to complete. Sufficient time and money needs to be invested in planning phase.

It is complicated to identify customers for service organizations especially in case of educational institutions (Fryer, Antony & Douglas, 2007) as the customer is often present and participates in the processes of service production (Evans & Lindsay, 2005). In an educational institute, the students play a multiple role being a recipient of the service, as raw material in process of transformation and are involved in the learning process at the same time (Sirvanci, 2004; Venkatraman, 2007). Also services like education have divergent stakeholders and customers which makes it difficult to delight and satisfy the demand of every single one (Fryer et al., 2007; Venkatraman, 2007).

Human interaction has a significant role in the quality of service. Organizations in service sector such as educational institutions have to deal with a large number of customers on daily basis which increases the chances of error, making it extremely difficult to achieve reliability (Evans & Lindsay, 2005). Also the customers' needs vary from individual to individual in case of service organizations due to which it becomes difficult to satisfy all the customers. The service quality is highly customized whereas in case of manufacturing, quality is uniformly specified and easier to achieve (Evans & Lindsay, 2005).

According to Kosgei (2014), a number of challenges in implementing TQM are; ineffective communication between the departments, organizational culture, lack of commitment by the top management and some workforce, lack of training of staff members and poor documentation. Quality needs to be embedded in the entire organization by including it in its strategy as well as in its culture. Training needs to be started from the top and both quantitative and qualitative measures must be included in it along with the training in project management and leadership (Kwak & Anbari, 2006).

After thorough review of literature, five major challenges to TQM implementation have been identified and used in this study. These are lack of human resource management and development, lack of planning for quality, lack of leadership, lack of customer focus and insufficient resources for implementing TQM (Sebastianelli & Tamimi, 2003).

TQM is a well researched topic but most studies have particularly focused on measuring the extent to which TQM is being implemented in Higher Education Institutes. The setup and processes of FG Educational Institutions are significantly different and so are the challenges faced by them. Little research or none regarding challenges faced by FG Educational Institutions in implementing TQM have been documented. Implementation of TQM is the necessary step that is needed to be taken in order to improve the standard of FGEIs (C/G) but there are a number of factors that cause hurdles in the implementation of TQM. Because of these factors the quality of education in these institutes is deteriorating day by day. Once these obstacles are identified, only then the respective authorities can make strategies and policies to overcome them.

3. Research Design

There are total 355 FGEIs (C/G) distributed all across Pakistan. A sample of twenty seven FGEIs (C/G) was randomly selected for the collection of data. The study conducted was quantitative in nature and collection of data was done using a self-administered questionnaire. The items of the questionnaire were adopted from the literature (Sebastianelli & Tamimi, 2003). The questionnaire used by the researcher contained 21 items that identified the barriers to TQM implementation and 3 items that identified potential outcomes from failed TQM. The scale used in the questionnaire was a five-point Likert scale that ranged from "strongly disagree" to "strongly agree". The questionnaire was modified in terms of language to make it easily understandable to the respondents.

Factor analysis was used to determine the construct validity. Components with Eigen value greater than 1 were retained and interpreted. The Kaiser-Meyer-Olkin (KMO) and Bartlett's test of Sphericity were measured. Regression analysis was carried out to determine which obstacles were more significant in case of each potential undesirable outcome from failed TQM. Data was analyzed using SPSS software version 20.0.

4. Results

Out of 270 questionnaires, 165 correct responses were received yielding a response rate of 61%.

The data is presented in Table 1 showing the standard deviation and mean of each obstacle. Higher mean indicates higher significance of the obstacle. The mean value of the responses ranged from 3.44 to 2.19. The results indicate that the most significant obstacle to TQM implementation in FGEIs (C/G) is "Promotions and increments in pay are not linked to achieving quality goals". It has a mean value of 3.44 and SD=1.231. This was followed by "Time constraints prohibit effective TQM implementation" (Mean=3.28, SD=0.942) and

“Insufficient resources to employ TQM” (Mean=3.28, SD=1.004).

Factor Analysis was carried out in order to identify the underlying constructs. Table 2 shows the results of the factor analysis. 21 variables were reduced to five factors which accounted for over 57% of the variation. Factor solution produced was done by dropping item loadings less than 1.0 (after varimax rotation). The KMO value (0.752) and Bartlett’s test of sphericity (0.000) were within the higher range. The reliability of the instrument was measured through cronbach’s alpha. It was within the acceptable range recommended by Nunnally (1978).

There were three items on the questionnaire that were considered as potential unfavorable outcome from failed TQM. Regression analysis was performed by taking these outcomes as dependent variables and the extracted factors as independent variable. The results of the regression analysis indicated which obstacles were significant in case of each outcome. Stepwise regression was used as a method of model building. Table 3 shows the results of the regression analysis.

Only one factor, “inadequate human resource management and development” was found to be statistically significant for the first potential outcome that was “frequent turnover of teachers”. As shown in Table 3, 9.8% of total variance in frequent turnover of teachers can be explained by this factor. Regression equation in this case can be expressed as:

$$\text{Teachers turnover} = 2.596 + 0.335 * \text{Inadequate HRM}$$

Two factors, “inadequate human resource management” and development and “lack of leadership” were found to be statistically significant for the second potential outcome “frequent turnover of management”. 42.6% of total variance in frequent turnover of management can be explained by these two factors. Regression equation in this case can be expressed as:

$$\text{Management turnover} = 2.801 + 0.725 * \text{Inadequate HRM} + .220 * \text{lack of leadership for quality}$$

Four factors, “lack of planning for quality”, “insufficient resources for TQM”, “lack of leadership for quality” and “lack of customer focus” turned out to be significant for the last potential outcome “quality improvement efforts rarely meet expectations in terms of desired results”. 27.6% of total variance in frequent turnover of management can be explained by these four factors. Regression equation in this case can be expressed as:

$$\text{Quality efforts} = 2.776 + 0.423 * \text{lack of leadership} + .347 * \text{lack of resources} + .310 * \text{lack of customer focus} + .179 * \text{lack of planning for quality}$$

5. Discussion

According to our analysis, the most significant challenge to TQM implementation in FGEIs (C/G) is “not linking the promotion and increments in pay with the achievement of quality goals”. A number of factors have an impact on employees’ satisfaction such as salary, promotion opportunities, recognition and reward system and job security (Lam, 1995). According to Deming (1986), environment based on proper reward and recognition motivates employees and enhances their satisfaction. Recognition and reward system should be based on equality, team approach and merit (IWA 2, 2003).

The second most significant barrier to TQM implementation was “time constraints prohibit effective TQM implementation”. Time constraint is usually given as a reason by the faculty of an institution for not incorporating quality into the curriculum. Time constraints become an issue due to lack of planning. Juran (1992) emphasized on the importance of quality planning by stating that it is the first step in quality management and TQM cannot be implemented without it. Proper planning results in smooth flow of processes and ensures that sufficient time and budget is allocated to every activity.

The next most significant barrier was “insufficient resources to employ TQM”. Implementation of TQM is expensive in terms of time, money and efforts. It is common observation that people who are impatient to see the outcomes get disillusioned with TQM and usually abandons it (Venkatraman, 2007). Public sector organizations don’t have direct financial control and are required to spend the funds under the heads for which the funds were released. The management often finds it challenging to allocate substantial amount of funds for quality improvement initiatives. This lack of control over the resources leads to slow progress and disappointment when the expected results are not achieved in time (Evans & Lindsay, 2005; Sirvanci, 2004).

The three items on the survey that are considered as the potential undesirable outcome from failed TQM are “frequent turnover of teachers”, “frequent turnover of management” and “quality improvement efforts rarely meet expectations in terms of desired results”.

For the first potential outcome “frequent turnover of teachers”, only one factor, “inadequate human resource development and management”, was found to be statistically significant. The result seems logical because training and skill development of teachers play a vital role in the successful implementation of TQM. In the absence of training, teachers will lack knowledge and skills which will result in their frequent turnover. Turnover can hurt the institution if the replaced teacher is a fresh teacher since less experienced teachers are less effective at improving students’ achievement than an experienced one (Balu, Béteille & Loeb, 2009).

Two factors, “inadequate human resource development and management” and “lack of leadership for quality”, were found to be statistically significant for the second potential outcome “frequent turnover of management”. Management’s lack of commitment to quality, their inability to provide the vision and direction to the entire organization to become committed to quality, lack of training in problem solving and identification techniques, communication and group discussion techniques contribute in the frequent management turnover. The high managerial turnover in an educational institute has a negative impact on teacher retention, teacher quality and students’ performance (Miller, 2009).

Four factors, “lack of planning for quality”, “lack of leadership for quality”, “insufficient resources for TQM” and “lack of customer focus” turned out to be significant for the last potential outcome “quality improvement efforts rarely meet expectations in terms of desired results”. The desired results can only be achieved if material resources are sufficient and top management is fully committed to quality. TQM organizations focus on customers’ needs. The top management should identify these needs and satisfy them in order to enhance customer satisfaction. Processes for monitoring and measuring customer satisfaction should be introduced (Hoyle, 2003). In the absence of an effective planning process, it won’t be possible to gather data and monitor the progress which would help in determining whether quality improvement efforts are yielding the desired results or not. Also without the cooperation and support of the customers, it is not possible for an institution to produce desired results.

The study highlighted the significant challenges faced by FGEIs (C/G) in implementing TQM. By overcoming these hurdles, success rate of TQM initiatives can be enhanced and quality of education provided by these institutions can be improved. The respondents of the study are only limited to the employees of FGEIs (C/G). Research can be conducted by including the parents as well as students in order to counter check the results. More in-depth study can also be carried out by including qualitative data through interviews. A similar study can be conducted on the public and private sector educational institutions.

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Table 1. Descriptive Analysis

Item no.	Questionnaire Items	Rank	Mean	SD
8	Promotions and increments in pay are not linked with the achievement of quality goals.	1	3.44	1.231
17	Time constraints prohibit effective TQM implementation.	2	3.28	.942
19	There are not sufficient resources to effectively employ TQM.	3	3.28	1.004
21	Customers are not involved while defining quality.	4	3.26	1.093
11	There is no joint planning with suppliers	5	3.16	1.122
6	Cross functional teams are not employed.	6	3.10	1.055
4	Employees are not trained in group-discussion and communication techniques.	7	3.00	1.082
13	There are excess layers of management.	8	2.97	.940
10	Quality action plans are often vague.	9	2.96	.981
18	Employees are resistant to change.	10	2.84	1.078
15	Quality is treated as a separate initiative.	11	2.81	1.113
5	Employees are not empowered to implement quality improvement.	12	2.80	1.094
9	Quality is not effectively measured.	13	2.77	0.950
20	The strategic plan is not customer driven.	14	2.71	0.983
7	Strategic plans do not include quality goals.	15	2.71	1.076
3	Employees are not trained in problem identification and problem-solving techniques.	16	2.64	1.088
12	The best practices of other institutes are not benchmarked.	17	2.59	0.952
2	Employees and/or teams are not recognized for achievements in quality improvement.	18	2.52	1.045
1	Employees are not trained in quality improvement skills.	19	2.45	1.181
16	Top management of our institution is not fully committed to quality.	20	2.34	0.909
14	Quality is not everyone's responsibility in our institution.	21	2.19	0.936

Table 2. Factor Analysis

Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
2	.846				
1	.846				
3	.843				
4	.767				
5	.756				
6	.676				
10		.799			
9		.791			
12		.743			
7		.525			
11		.516			
8		.445			
15			.692		
14			.686		
16			.658		
13			.658		
17				.756	
19				.647	
18				.577	
20					.795
21					.658

Table 3. Regression Analysis

Dependent Variable	Significant Independent Variable	R ²
There is a frequent turnover of teachers	Factor 1: Inadequate Human Resource Management and Development	.098
There is a frequent turnover of management	Factor 1: Inadequate Human Resource Management and Development Factor: 3 Lack of Leadership for quality	.426
Quality improvement efforts rarely meet expectations in terms of desired results	Factor 2: Lack of Planning for Quality Factor 3: Lack of Leadership for quality Factor 4: Insufficient Resources for TQM Factor 5: Lack of Customer Focus	.276