

Study of the Application of TQM (Total Quality Management) in the Academic Libraries of Bandar Abbas City in 2014

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ABSTRACT: Total Quality Management (TQM) is a useful strategy which can be used to improve the competitive advantages in libraries. To Implement TQM, it is necessary to identify users' needs, accept continual improvement of activities and also the mutual benefits in the relationship with suppliers. The aim of current study was to identify the level of using TQM components in the academic libraries in Bandar Abbas city, Iran in 2015. This was a descriptive-analytical study in which all staffs working in academic libraries of Bandar Abbas city were recruited (60). We used the questionnaire which was recently developed by Taherkhani and Fathizadeh (1391) according to ISO 9000 and relevant literature. We used descriptive and analytical statistics and SPSS 16 to analyze our data. Findings showed that among the TQM components, only "Focusing on customers" had a suitable situation (3.16%), while "Leadership" (2.45%), "Systemic approach to management" (2.41%), and "Factual approach for the decision making process" (2.53%) were in lower positions. However, "Continual improvement of activities in libraries" (2.19%), "Process approach" (2.12%), "Relationship with suppliers" (2.29%), and "Involvement of staffs" (2.23%), had the worst positions in the studied libraries. The use of TQM and its components in the academic libraries of Bandar Abbas city were not in an ideal situation. Thus, it is essential to make proper planning, pay more attentions to this important issue and try to implement and improve TQM in the academic libraries of this city.

Introduction

One of the important ways to improve the quality is the use of Total Quality Management, a process in which the management tries to improve the quality and customer satisfaction with the participation of employees, customers, and creditors (1).

This management style includes a set of actions, processes, and techniques such as statistical process control, design and process management, customer satisfaction measurement, management commitment, participation, empowerment of employees, and solving the problems through teamwork. Total Quality Management (TQM) focuses on continuous improvement of processes and aims to eliminate or reduce volatility and disadvantages by removing the root causes (2).

Libraries and communication centers are among the organizations that need to pay a special attention to this issue. Application of TQM in management of libraries, in addition to rapid and timely communication, leads to increased efficiency, satisfaction of clients, and growth of this social institution (3).

On the other hand, since the ultimate goal of libraries is to provide services in the best possible way to seriously meet the expectations of clients. The most important solution to meet these expectations is the implementation of TQM in service provider organizations such as libraries (4).

Therefore, paying attention to TQM in libraries and especially academic libraries is very important because it leads to identification of the status quo, understanding the strengths and weaknesses, increased participation of employees, improved quality of services, and increased satisfaction of users. According to what mentioned above, the necessity for conducting such a study is quite clear.

Methodology

The present research was a descriptive-analytic survey. The statistical population included all librarians in academic libraries of Bandar Abbas, Hormozgan Province, Iran. Academic libraries in Bandar Abbas include University of Medical Sciences, Islamic Azad University, Payam Noor University, University of Applied Sciences, and Hormozgan University. The number of librarians in these libraries was 60, all of whom were selected as the sample.

To collect the required data and information, a questionnaire was extracted from the study of Taherkhani and Fatehi Zadeh(5). This questionnaire was developed based on ISO 9000 Standard, literature review, and library studies.

Eight components of Total Quality Management, found the most perfect ones on this topic by the author, were selected. These 8 components included leadership commitment, systemic approach to management, continuous improvement, actual approach to decision-making, procedural approach, mutual and beneficial relationship with suppliers, participation of employees, and caring for users. The questionnaire consisted of two parts. The first part was related to personal information and the second part included 8 sections and 37 items based on Likert’s 4-point scale (4: very high, 3: high, 2: low, and 1: very low).

Validity and reliability of the questionnaire were also evaluated. The reliability was obtained 0.80 which shows its acceptable validity and reliability. In addition, the internal consistency reliability was assessed after data collection. Cronbach’s alpha was calculated to be 80% which indicates a high reliability.

To analyze the data collected, descriptive and analytic statistics were used in SPSS-16. Kolmogorov-Smirnov test was used for determining the type of tests (parametric or non-parametric). In addition, to test the hypotheses, Mann-Whitney and Kruskal-Wallis tests were used.

Findings

In this research, the extent of using the components of Total Quality Management (TQM) in academic libraries of Bandar Abbas was studied. Academic libraries in Bandar Abbas include University of Medical Sciences, Islamic Azad University, Payam Noor University, University of Applied Sciences, and Hormozgan University. The number of librarians in these libraries was 60, all of whom were selected as the sample. Among the subjects, 15 were male (25%) and 45 were female (75%), with a mean age of 37.47±5.44 (Table 1).

Table 1: Frequency, mean, and standard deviation of the age of librarians by gender

Gender	Frequency	Mean	Standard deviation	Minimum	Maximum
Male	15	34.47	5.69	24	45
Female	45	38.47	5.03	20	50
Total	60	37.47	5.44	24	50

Among the librarians, 11 (18.3%) were director or supervisor and 49 (81.7%) were employee. In terms of education level, 11 (18.3%), 8 (13.3%), 24 (40%), and 27 (28.3%) of librarians had a high school diploma, an associate’s degree, a bachelor’s degree, and a master’s degree or higher.

The mean work experience of all librarians was 13.45 years with a standard deviation of 6.03 years. These figures were 9.73 and 5.03 years for men and 14.69 and 5.86 years for women (Table 2).

Table 2: Frequency, mean, and standard deviation of the work experience of librarians by gender

Gender	Frequency	Mean	Standard deviation	Minimum	Maximum
Male	15	9.73	5.03	1	18
Female	45	14.69	5.86	3	28
Total	60	13.45	6.03	1	28

Table 3 shows the comparison of mean score of leadership commitment with the average (2.5). According to the results, the mean score of leadership commitment is not significantly different from the average. Therefore, it can be stated that leadership commitment is at an average level.

Table 3: Comparison of mean score of leadership commitment with the average (2.5)

Questionnaire section	Mean	Standard deviation	Average level	Test value	Degree of freedom	P-value	Status
Leadership commitment	2.45	0.60	2.50	-0.684	59	0.497	At an average level

Table 4 shows the comparison of mean score of systemic approach to management with the average (2.5). According to the results, the mean score of systemic approach to management is not significantly different from the average. Therefore, it can be stated that systemic approach to management is at an average level.

Table 4: Comparison of mean score of systemic approach to management with the average (2.5)

Questionnaire section	Mean	Standard deviation	Average level	Test value	Degree of freedom	P-value	Status
Systemic approach to management	2.41	0.60	2.50	-1.183	59	0.241	At an average level

According to Table 5, the mean score of continuous improvement is significantly different from the average. Therefore, it can be stated that continuous improvement is lower than the average.

Table 5: Comparison of mean score of continuous improvement with the average (2.5)

Questionnaire section	Mean	Standard deviation	Average level	Test value	Degree of freedom	P-value	Status
Continuous improvement	2.19	0.55	2.50	-4.445	59	<0.001	Lower than the average

Table 6 shows the comparison of mean score of actual approach to decision-making with the average (2.5). According to the results, the mean score of actual approach to decision-making is not significantly different from the average. Therefore, it can be stated that actual approach to decision-making is at an average level.

Table 6: Comparison of mean score of actual approach to decision-making with the average (2.5)

Questionnaire section	Mean	Standard deviation	Average level	Test value	Degree of freedom	P-value	Status
Actual approach to decision-making	2.53	0.55	2.50	0.407	59	0.685	At an average level

Table 7 shows the comparison of mean score of procedural approach with the average (2.5). According to the results, the mean score of procedural approach is significantly different from the average. Therefore, it can be stated that procedural approach is lower than the average level.

Table 7: Comparison of mean score of procedural approach with the average (2.5)

Questionnaire section	Mean	Standard deviation	Average level	Test value	Degree of freedom	P-value	Status
Procedural approach	2.12	0.61	2.50	-4.786	59	<0.001	Lower than the average

Table 8 shows the comparison of mean score of mutual and beneficial relationship with suppliers with the average (2.5). According to the results, the mean score of mutual and beneficial relationship with suppliers is significantly different from the average. Therefore, it can be stated that mutual and beneficial relationship with suppliers is lower than the average level.

Table 8: Comparison of mean score of mutual and beneficial relationship with suppliers with the average (2.5)

Questionnaire section	Mean	Standard deviation	Average level	Test value	Degree of freedom	P-value	Status
Mutual and beneficial relationship with suppliers	2.29	0.70	2.50	-2.296	59	0.025	Lower than the average

Table 9 shows the comparison of mean score of participation of employees with the average (2.5). According to the results, the mean score of participation of employees is significantly different from the average. Therefore, it can be stated that participation of employees is lower than the average level.

Table 9: Comparison of mean score of participation of employees with the average (2.5)

Questionnaire section	Mean	Standard deviation	Average level	Test value	Degree of freedom	P-value	Status
Participation of employees	2.23	0.65	2.50	-3.196	59	0.002	Lower than the average

Table 10 shows the comparison of mean score of caring for users with the average (2.5). According to the results, the mean score of caring for users is significantly different from the average. Therefore, it can be stated that caring for users is higher than the average level.

Table 10: Comparison of mean score of caring for users with the average (2.5)

Questionnaire section	Mean	Standard deviation	Average level	Test value	Degree of freedom	P-value	Status
Caring for users	3.16	0.82	2.50	6.198	59	<0.001	Higher than the average

Discussion and conclusion

The study findings showed that among the components of Total Quality Management, only “caring for users” (with a mean score of 3.16%) was higher than the average level. Components of “leadership commitment” (with a mean score of 2.45%), “systemic approach to management” (with a mean score of 2.41%), and “actual approach to decision-making” (with a mean score of 2.53%) were at the average level. In addition, the rest of components including “continuous improvement” (with a mean score of 2.19%), “procedural approach” (with a mean score of 2.12%), “mutual and beneficial relationship with suppliers” (with a mean score of 2.29%), and “participation of employees” (with a mean score of 2.23%) were lower than the average.

Zanjirchi *et al.* (2011)(6) studied the relationship of each of the main dimensions of TQM with the main organizational agility capabilities in libraries. Their results showed that “leadership commitment” ranks first and then “individuals”, “customer orientation”, and “procedural approach” rank second to fourth in improving agility capabilities in library services.

The findings of Taherkhani *et al.* showed that mean score of four components of leadership, continuous improvement, procedural approach, and participation of employees was less than the average level contained in this standard. In addition, the mean score of three components of systemic approach to management, actual approach to decision-making, and mutual and beneficial relationship with suppliers was lower than the average (10) mentioned in this standard for 4-component indices. The results of testing the research hypotheses indicated that the use of quality management in Library, Museum, and Documents Center of the Islamic Consultative Assembly has been significantly observed at a low level.

The results show that the extent to which the eight principles of ISO 9000 have been observed in libraries of Shahid Beheshti University for components of users, leadership, participation of employees, procedural approach, systemic approach, continuous improvement, actual approach to decision-making, and mutual and beneficial relationship with suppliers was 45.6%, 38.4%, 27.2%, 46.7%, 36.5%, 29.8%, 34.3%, and 40.9%, respectively. The highest and the lowest percentages were related to actual approach to decision-making (46.7%) and participation of employees (27.2%), respectively.

According to the research findings, which are consistent with the present study, it can be generally stated that it is not currently possible to properly utilize an appropriate model of Total Quality Management in libraries of Shahid Beheshti University(5).

Gheisarinik (2012) studied the possibility of establishing a Total Quality Management system in the Organization of Libraries, Museums, and Documents Center of Astan Quds Razavi using components such as users, leadership, participation of employees, procedural approach, systemic approach, continuous improvement, fact-based decision making, and mutual and beneficial relationship with suppliers. The results showed that the principle of leadership is observed appropriately and the organizational managers follow a leadership manner(7). Farnia and Yamchi (2010) studied the level of TQM in public libraries in East Azarbaijan Province. The findings showed that there is a significant difference between the status quo and desired status in component of leadership commitment. The results of the present study indicated that supervisors and managers of academic libraries in Bandar Abbas are in an average status in terms of leadership commitment(8).

According to all mentioned above, the study results showed that the extent of using Total Quality Management and its components in academic libraries of Bandar Abbas is not in a desirable status. Therefore, it is important to improve the status of TQM in libraries of this city through planning and paying more attention to this issue.

Considering the moderate status of this component in academic libraries of Bandar Abbas, the employees probably have not done their responsibilities as expected and there has been no evaluation of their activities. In addition, it seems that interrelated processes in these libraries have not been properly understood and managed to improve the efficiency and effectiveness of libraries in achieving their objectives.

Conflict of Interest

There is no conflict of interest to be declared.

Authors' contributions

All of authors contributed to this project and article equally. All authors read and approved the final manuscript

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