
Feasibility Study of Implementing Total Quality Management in Shiraz Technical and Vocational Training Centers

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ABSTRACT

The purpose of this study is the feasibility of establishing Total Quality Management. The research method is survey type. The population of vocational training centers in Shiraz. The sample size was determined by conducting 85 patients included 69 males and 16 females. Data has been collected through a questionnaire of Total Quality Management (NouhPisheh). To analyze the data, descriptive and inferential statistics were used and descriptive statistics to analyze survey data from a frequency distribution table, the mean and standard deviation and inferential statistics were used in this test (one sample) and chi-square. Results of data analysis using t-test indicated that the basis for the establishment of comprehensive quality management in technical and vocational training centers in Shiraz with respect to the components of management commitment, customer focus, decision-making and inclusive participation, there is continuous improvement, assessment, training and staff development. The results of the data analysis using chi-square test showed that gender and acceptance of Total Quality Management have no relationship with each other. In addition, chi-square test indicated that work experience plays no role in the adoption of TQM. Finally, according to the views of principals, teachers and administrative staff using the chi-square test, the participants in the study, trainees and staff consider it as a client.

Keywords: Feasibility study, Total quality management, Technical and vocational Training centers, Customer.

Introduction

In today's world, a world has full of change. With time and technological changes, organizations, businesses, manufacturing plants and service industry are becoming more sophisticated by the day. In a world of new ideas replace old

thinking has taken a static view is doomed to destruction. Another static reflection fall from crisis to crisis without hope and vision for the future of the program and move forward. Total Quality Management, including theories that emerged in the '80s

and 90s by management scholars and most successful companies, industrial and service organizations worldwide benefit from it and achieved huge success (Karimi, 1999). Total Quality Management movement in industrialized and developing countries, public and private sector encouraged to review their policies and reduce customer service time. This movement is of great relevance and proximity to institutions and causes an increase in efforts to improve quality and service, as well as risk control and cost in this section because, first, consumer awareness and expectations of clients has increased and as a result, they pose new demands and variable (Hossein Zadeh, 2002). This transformation results in a significant increase in speed, quality, and service organizations have flexibility. Second, private sector companies more than ever the importance of quality improvement methods in order to satisfy customers realize they have to work. This has led to consumers, government agencies are also expected to improve the quality of their services. Thirdly, in a tough competitive environment, the tools and methods of quality improvement as one of the key competitive advantages are (Ford, 1998). In any organization, there are many untapped resources and workforce managers should be aware of the resources they are searching for optimal use. Optimal efficiency of the institution when it is possible that management has a rich culture using all available resources and obtain their decisions based on accurate information and knowledge (Dieter, 2003). The productivity and culture in all aspects of life, we believe that the use of all facilities, it is the first step into the organization's culture, especially the culture of productivity managers, managers who see productivity as a culture, belief, beliefs, and values

capable, motivated and committed individuals in their organization raise from potentiality to actuality. Management believes that one way to change the culture and mentality of employees and managers is very important that Total Quality Management (Bazargan, 1994). Also, there are changes in the global economy, countries have to believe that the presence and survival in global markets, regional and domestic organizations to increase their capacity and capability. Revision of conventional methods, re-engineering and utilizes the system approach in order to overcome the problems faced, is obvious. In addition, utilizing the Quality Management of an organization, its success in implementing improvement programs evaluated at different time, it can compare its performance with other organizations, especially the best of them. Therefore, the feasibility study is trying to implement Total Quality Management (TQM) engage in vocational training centers in Shiraz as a first step in improving service quality.

Reviewing the concepts and Research background:

TQM is a process of continuous improvement in its efforts to manage expectations are met, clients or customers efficiently (NiyazAzari et al, 2010). Anthony (2002) also stated that TQM leads to increased employee engagement, improve relationships, increase production, improve quality, reduce rework, and increase customer satisfaction, reduce costs and improve competitive advantage is of poor quality. Today, the rapid growth of technology and the variety of products in the fierce competitive environment despite resource constraints and problems of manpower, managers of public or private institutions, large and small,

manufacturing or services to meet the challenges their organizations are forced to seek appropriate solutions (Chadwick, 1995). Therefore, in the present state of the right tools for a dynamic organization that is targeted to operate in a competitive environment, known as Total Quality Management (Abzari, 2002). U.S. DOD definition institution or set of principles of total quality management Inventory management system and method of operation that the basis of gradual, continuous improvement and systems in line with all members involved its goal is customer satisfaction and are working together now and in the future (Haji Sharif, 1995). Total quality management and its implementation in the field of study has been the attitude of some of them is mentioned below. Larry Dusten (1995) examined the perspectives of leadership and management in higher education towards TQM payment. The purpose of this study was to determine whether the tools and techniques that can enable higher education, as it would enable U.S. industry? The results showed that the total quality management wants to revolutionize higher education must be appropriate resources allocated to higher education, an accurate measure and evaluate this technique can be used to determine advancement to higher education, the effectiveness of efficiently. Roderick Sunil (1997) A critical analysis of TQM in higher education continued payments. The aim of this study was that the obligation to pay them in five HEIs towards TQM implementation, testing and deployment determines how much it can affect the continuity of higher education. The results showed that TQM can be used in continuing higher education, leading to a massive transformation that is based on long-

term plan. Briggs (1998) study entitled involvement of senior leadership in the way of the success of TQM in the Air Force Guard units conducted and the findings reported involvement of the leader in the field weak. This study also showed that the theories of quality Air Force leaders their jobs are rarely used. Subjects, the quality of the air force, were evaluated. If the leader is not only active and direct involvement of employees, but also to curriculum come to believe that improve the quality and the leaders involved are committed strongly. Langan (1998) conducted a study titled Study of the groups in the process of applying TQM in Financial Services and the University Lova and the results achieved by the three factors with the greatest impact on the working group are: 1) lack of or ambiguous perspective targets 2) insufficient training, 3) poor leadership and three factors had the most impact on group work are: 1) willingness to participate in group 2) shared vision, 3) a common goal. In 1998 Oregon State University about the quality of their research, this began with the question of how to apply the methods of education quality in the industry. The university found that the learning process more predictable levels of service at a university, payment, enrollment, etc. are controlled and are a good starting point for implementing total quality management process. Dayton (1999) conducted a study of the critical success factors for total quality management systems and quality programs in the U.S and came to the conclusion that all TQM success factors identified in the 1996 plan were important in American quality and the commitment of senior management was recognized as the most important factor. Personality factors also have an impact on job satisfaction.

Klocinski (2004) conducted a study to determine the success and failure factors in 184 educational institutions and concluded that 37% of institutions, lack of support and poor management, or leadership as the main barriers of the lack the implementation of TQM mentioned. In general, the failure or success of higher education institutions in applying these methods, like the other organizations and professions. Institutions that were deemed successful in their endeavors, by the overwhelming support of management, vision, teamwork and strong leadership were distinct from other institutions. Lio (2005) on the insights, implications and practices of TQM in Taiwan Junior College (CIO) did research and came to the conclusion that TQM is effective when the specific organizational culture and processes of the organization managing governing be. In such an atmosphere of change is seen as an opportunity rather than a threat, principles and practices of TQM can assist the change process. Roopchand (2005) conducted a study entitled Critical analysis of total quality management in higher education. The results indicate strong support of the application of these principles in higher education. Commitment from top leadership was considered very important factor. Barriers such as lack of commitment, lack of faculty support, the absence of a strategic plan, the lack of a detailed view of the business model applied to engineering education and lack of interdisciplinary curriculum can be detected because the TQM strategy involves receptor long -term, for

improving the organization that can lead to long-term profitability.

Research Methodology:

The purpose of this research is an applied research and the method of data collection component is a descriptive survey. The study population consisted of all directors, coaches and administrative staff, technical and vocational training centers, the city has 92 cases. In this study, all subjects were selected as a sample and therefore sampling method is Census. After collecting the questionnaires, 85 questionnaires were fully answered and seven questionnaires were incomplete due to reach more conclusive results were deducted from the sample. In this study, primary data collection, field methods (questionnaires) are used.

In this study, a questionnaire is used as follows:

Data from the questionnaire for the first time by the Total Quality Management (NouhPisheh, 2007) a research on the feasibility of using Total Quality Management in Education Organization of Fars province have been used. The dimensions of this questionnaire are: management commitment, customer focus, training and staff development, decision-making and inclusive participation, evaluation and continuous improvement. In research conducted by NouhPisheh, to determine the reliability of the questionnaire, 30 questionnaires were distributed and collected by the community. Cronbach's alpha coefficient was 0.88 Total Quality Management has 36 questions.

Table 1. Reliability of research instrument

Quality Dimensions	Number of questions	Cronbach's alpha
Management commitment	6	0.93
Customer care	7	0.957
Training and staff development	5	0.962
Inclusive participation in decision making	6	0.85
Evaluation	5	0.79
Continuous Improvement	6	0.90

The credit for the content validity of the questionnaire was used for both credit factors. Content validity for the assessment of experts, academics and experts were used. At this stage, according to the opinions of people mentioned, it was necessary amendments come into operation and thus ensure that researchers will measure the desired characteristics of the questionnaire .inclusive participation in decision making, evaluation and continuous improvement of the quality Management measures the size, distribution, and for each of those explanations were given

questionnaires to complete. In the present study, data analysis, descriptive and inferential statistics will be conducted in two parts. Descriptive statistics, mean, standard deviation, and the questions analyzed using inferential statistics, t-test - single sample / chi-square were used for data analysis.

Research findings:

As seen in the table below, the dimensions of Total Quality Management, the highest average of the inclusive participation in decision making and continuous improvement of the lowest means.

Table 2. Descriptive statistics of the questionnaire

Dimension	Average	Minimum	Maximum	Standard deviation
Management commitment	3.768	2.17	5.00	0.605
Customer care	3.675	1.86	5.00	0.774
Training and staff development	3.628	2.20	5.00	0.727
Inclusive participation in decision making	3.964	2.33	5.00	0.525
Evaluation	3.658	2.40	5.00	0.643
Continuous Improvement	3.529	1.60	5.00	0.739

First question: Is there the basis for the establishment of comprehensive quality management in vocational education component of Shiraz, according to

management commitment? To answer this question, one-sample t-tests were used and the results are given out in the following table is visible.

Table 3. Results of one sample t-test for the separation of management's commitment to gender

Variable	Gender	Number	Average	Standard deviation	Standard error of the mean	Average difference	Degree of freedom	T	Significant level
Management Commitment	Man	69	3.768	0.605	0.065	0.768	68	11.706	0.000
	Woman	16	3.659	0.543	0.054	0.659	15	11.706	0.000

The test, the significance level was estimated at 95 per cent, 0.000, respectively. Because of the significance level is less than 05.0, so reject the null hypothesis and accept and assume the opposite, given that the mean difference is positive, there is a 95% confidence level can be argued that the basis for the establishment of comprehensive quality management in vocational training

centers with respect to the Component Management commitment Shiraz.

Second question: Is there the basis for the establishment of comprehensive quality management in vocational education component of Shiraz, according to according to customer? To answer this question, a one-sample t-test was used for the average given in Table 4-4 and the results are visible.

Table 4. Results of one sample t-test for the next customer focus

Variable	Number	Average	Standard deviation	Standard error of the mean	Average difference	Degrees of freedom	T	Significant level
Customer care	85	3.964	0.525	0.057	0.964	84	16.914	0.000

The test, the significance level was estimated at 95 per cent, 0.000, respectively. Because of the significance level of less than 0.05 is therefore null hypothesis rejected assumes vs. accept and considering that the mean difference is positive, the 95% confidence level can be argued that there is a basis for establishing quality management comprehensive vocational training

centers Shiraz component according to customer focus.

Third question: Is there the basis for the establishment of comprehensive quality management in vocational education component of Shiraz, according to the decision and inclusive participation? To answer this question, one-sample t-tests were given out and the results can be seen in Table 5.

Table 5. Results of one sample t-test for the inclusive participation in decision making

Variable	Number	Average	Standard deviation	Standard error of the mean	Average difference	Degrees of freedom	T	Significant level
Inclusive participation in decision making	85	3.675	0.774	0.084	0.675	84	8.040	0.000

The test, the significance level was estimated at 95 per cent, 0.000, respectively. Because of the significance level of less than 0.05 is therefore rejected the null hypothesis and accept before considering that the mean difference is positive, it can be argued that there is a confidence level of 95% for quality

management inclusive education and vocational components of Shiraz, according to the decision and inclusive participation.

Fourth question: Is there the basis for the establishment of comprehensive quality management in vocational education

component of Shiraz due to continuous improvement? To answer this question, one-sample t-tests were used and the

results are given out in the following table is visible.

Table 6. Results of one sample t-test for continuous improvement

Variable	Number	Average	Standard deviation	Standard error of the mean	Average difference	Degree of freedom	T	Significant level
Inclusiveparticipation indecision making	85	3.529	0.739	0.080	0.529	84	6.603	0.000

The test, the significance level was estimated at 95 per cent, 0.000, respectively. Because of the significance level of less than 0.05 is therefore rejected the null hypothesis and accept before considering that the mean difference is positive, There is a 95% confidence level can be argued that the basis for the establishment of comprehensive quality management in vocational training

centers in Shiraz, according to the components of continuous improvement.

Fifth question: Is there the basis for the establishment of comprehensive quality management in vocational training centers in Shiraz, according to the evaluation criteria? To answer this question, one-sample t-tests were used and the results are given out in the following table is visible.

Table 7. Results of one sample t-test for the evaluation of improvement

Variable	Number	Average	Standard deviation	Standard error of the mean	Average difference	Degree of freedom	T	Significant level
Inclusiveparticipation indecision making	85	3.628	0.727	0.078	0.628	84	9.439	0.000

The test, the significance level was estimated at 95 per cent, 0.000, respectively. Because of the significance level of less than 0.05 is therefore rejected the null hypothesis and accept before considering that the mean difference is positive, it can be argued that the 95 percent confidence level is necessary for management of quality of vocational

training centers in Shiraz, according to the evaluation criteria.

Sixth question: There is the basis for the establishment of comprehensive quality management in vocational education and training component of Shiraz, according to staff development? To answer this question, we used single-sample t -tests were given out and the results can be seen in the following table.

Table 8. Results of one sample t-test for the improvement of education and staff development

Variable	Number	Average	Standard deviation	Standard error of the mean	Average difference	Degrees of freedom	T	Significant level
Training and staff development	86	3.658	0.346	0.342	0.658	84	10.565	0.000

The test, the significance level was estimated at 95 per cent, 0.000, respectively. Because of the significance level of less than 0.05 is therefore rejected the null hypothesis and accept before considering that the mean difference is positive, There is a 95% confidence level can be argued that the basis for the establishment of comprehensive quality

management in vocational training centers in Shiraz, according to the components of continuous improvement.

Seventh question: What is the attitude of men towards women and acceptance of Total Quality Management in Vocational Training Centers in Shiraz? To answer this question, chi-square test (χ^2) was used and the results can be seen in the following table.

Table 9. Chi-square test to determine the relationship between gender and Total Quality Management (Chi-Square Tests)

		Total Quality Management				Total
		2	3	4	5	
Gender	Male	1	13	34	15	63
	Female	1	5	14	2	22
Total		2	18	48	17	85

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.676 ^a	3	.444
Likelihood Ratio	2.903	3	.407
Linear-by-Linear Association	1.657	1	.198
N of Valid Cases	85		

a. 4 cells (50.0%) have expected count less than 5. The minimum expected count is .52.

According to the results of the test, the significance level of the test is equal to 444.0, 556.0, thus assuming H0 rejected with confidence and say that Sex and the adoption of Total Quality Management have no relationship with each other, or in other words, gender does Total Quality Management is not in compliance.

Eighth question: Are experiences in the attitudes of principals, teachers and administrative staff to the effect that the adoption of Total Quality Management? To answer this question, chi-square test (χ^2) was used and the results can be seen in the following table.

Table 10. Chi-square test to determine the relationship between work experience and Total Quality Management (Chi-Square Tests)

	Total Quality Management					Total	
	1	2	3	4	5		
Work Experience	<5	0	0	5	11	0	16
	6-10	0	1	2	10	5	18
	11-15	0	1	4	9	6	20
	16-20	0	0	5	10	6	21
	20<	0	0	2	8	0	10
Total	0	2	18	48	17	85	

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.886 ^a	12	.308
Likelihood Ratio	19.532	12	.076
Linear-by-Linear Association	.414	1	.520
N of Valid Cases	85		

a. 15 cells (75.0%) have expected count less than 5. The minimum expected count is .24.

According to the results of the test, the test significance level equal to 0.308, so assume H0 with confidence 0.691 reject call admission Quality Management experience and have no relationship with each other or, rather, experience does influence the adoption of Total Quality Management.

Ninth question: What group is the principals, teachers, administrative staff, technical and vocational training centers in Shiraz, as a customer (audience)? To answer this question, chi-square test (χ^2) was used and the results can be seen in the following table.

Table 11. Chi-square test to determine the client (viewer)

χ^2	19.682
Degrees of freedom	5
Significant level	0.001

Customer group	Observed frequency	Theoretical frequency	Difference
Trainees	8	14.2	6.2
Staff	13	14.2	- 1.2
Society	9	14.2	- 5.2
Trainees and staff	24	14.2	9.8
Internships and community	8	14.2	6.2
All items	23	14.2	
Total	85		

According to the results of the test, the significance level of the test is equal to 0.001, so it's safe to assume H0 0.999

reject and say, consider the principals, staff and coaches have been different. Due to the frequency obtained for the trainees

and staff (24) is higher than for other items, so the views of principals, teachers and staff (students and staff) are considered as a customer.

Discussion and conclusions:

Before you engage the services of any organization must identify its customers effectively. Organizations today must be able to meet the needs of its customers. Technical and professional organization as an organization must be able to meet the needs of individual and social human oriented students, staff, labor market and society and this requires a management style based on the needs of stakeholders and stakeholders. Different individuals may come as clients of the vocational centers. The first group is the main clients of these centers, trainees. The staff and community are also clients of these centers. Clients against a wide range of services are provided through the study of how to meet their satisfaction, and accordingly have a choice to choose a specific center. In this paper, according to the views of staff, coaches and directors from among all those who are likely customers of these facilities, students and staff, as most clients are referred. Considering the results of the investigation, authorities must make every effort to introduce better services to the customers to take action in order to keep satisfied customers in mind and establish how best to implement Total Quality Management step remove. It should also be noted that the adoption of Total Quality Management TQM training and work experience unrelated to the end started with the training (results). This training is not solely focused on understanding the concepts of total quality management in the organization about how it would work in the environment and its working position, the

received an education. The purpose of education is that all employees are able to solve problems which have prevented their intended purposes, they are. Sending people to training courses to solve problems alone are not sufficient and should not be thought that this work covers all the requirements of Total Quality Management. It is necessary plans and programs, with the goal of coordination is required. Adopting this approach to staff training and awareness becomes part of the culture of the organization. That is an important part of total quality management and innovation along with discovering new and better ways to solve problems, should always be updated and expanded. This, more competitive organizations through its employees provide. Educational structure from the top down, meaning the team starts high and lower levels of the organization to be transferred. The golden rule is to ensure that managers of educational programs, its experts train people. Learning goals are familiar with their duties and responsibilities and identify customers and become familiar with their needs, level of knowledge, people familiar with the concepts of total quality management and continuous recollection and familiarity of the concepts and skills employees in applying statistical tools and techniques of TQM.

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