Assessment Application of Total Quality Management in Saudi Higher Education

A Case Study of Prince Sattam Bin Abdulaziz University (PSAU)

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ABSTRACT

The research assesses the application of total quality management in Saudi higher education: A case study of Prince Sattam bin Abdulaziz University (PSAU). It evaluates to what extent that TQM's culture is distributed among the university staff members, what is the role of top management of the university during applying the TQM programme. The objectives aim at first to review TQM concept. Second: to highlight the problems which face the higher education institutions, when they adopt TQM approach. Third: to develop successful application of TQM programme.

The research investigates the following hypotheses: lack of the quality culture among both staff members and top management do not support the application of TQM programme application, and they are not in full commitment towards it.

The research follows the descriptive analytical method it uses questionnaires to collect the data. The conclusions of the study shows that the research hypotheses are rejected thus total quality management's concept and culture are widely distributed among the staff members of (PSAU). However, the top management support the application of TQM programme and has full obligation towards it. Finally, the researcher introduces some recommendations in order to improve the application of TQM programme. These recommendations are: The necessity of objective stability. Top management must concentrate on long term objectives rather than short term ones.

Keywords: Total – Quality – Management – Higher – Education

1. INTRODUCTION

The concept of total Quality Management (TQM) represents one of the modern managerial concepts, which aims to develop structural and managerial solutions, in order to increase the efficiency and effectiveness of both public and private organizations. The decrease of production and productivity, and the bad quality of service were the most prominent characteristics of these organizations in the past.

Therefore, it was necessary to find out a managerial approach to overcome these problems, especially during the new millennium, which witnesses different cultural, social, and economic changes. These are reflected on the consumers' behavior who have become more aware of the different methods of performance improvements, which an organization can use, in order to develop its services quickly and with the least cost.

Therefore, organizations with their different activities must adopt these changes and developments, because their survival and success are measured by how they are ready to satisfy the consumer's needs and wants.

The developed countries have given priority to the quality of the services, which they provide for their citizens. But they have not reach that high standard of services except through the adoption of the managerial methods, which prevail in the private sector. The private sector with its profitability and competitive natures takes a leading role in the trail and application of modern managerial concepts through which it may win a lion's share in the market.

The experiences of both the Japanese public sector and the American public sector in making use of the managerial concepts and models of the Japanese private sector and the quality control courses are part of the continual efforts to develop the standard and quality of governmental services in these countries .No doubt, many of these managerial concepts and models have achieved great contribution and qualitative developments. Therefore, this research examines the most comprehensive and modern managerial concept, which is regarded as the best in terms of application in the public sector in the developing countries. This is developing countries This is total quality management.

2. THE RESEARCH PROBLEM

The concept of total quality management has a great importance among management scholars. To them it is more importance than other traditional concepts such as scientific management, bureaucracy or even modern concepts like management by objectives (MBO). Essays, research papers or scientific studies in periodicals and journals, often example and analyses T.Q.M unfortunately, in the developing countries these have to the least interest in T.Q.M as the old traditional managerial concepts such as Bureaucracy are still practiced. This has led to many managerial problems, and consumer's dissatisfaction.

Total Quality Management in higher Education

No, doubt, that the total quality Management concept, philosophy, and principles are used firstly in the industrial sector, therefore, we note that most of these concepts and principles are related to physical products rather, than services. In regards to this factor, quality in service sector is also necessary, and important.

Higher education intuitions use different components in order to render its service for the society. Usually these organizations, play three roles, which are rendering the society with knowledge, scientific research, and community service.

Therefore, the research problem is to assess the application of T.Q.M concept through determining its degree of success in solving the managerial problems, and raising productivity and efficiency in the higher education institutions. The study shall try to evaluate the constraints and obstacles to its application. This research shall try to answer the following questions.

1. What are the basic ideas which T.Q.M introduces and makes it differ from the previous managerial concepts?

2. What are the benefits which may be gained from the application of T.Q.M concept in higher education institutions?

3. How can the concept of T.Q.M be applied successfully in higher education institutions?

Objectives of the Study

1. To determine the use of T.Q.M concept, and to review the experience of some higher education institutions (HEIs).

2. To highlight the problems which face the higher education institutions, when they apply T.Q.M concept in HEIs.

3. To help in developing successful application of T.Q.M programme.

The Importance of the Research

Public organizations are more interested today in improving their services to a better standard which can achieve the goals of these services either more effectively or more competently. No doubt, the managerial reform, which is a major characteristic of the modern administrative organization, aims to solve the problems, which hinder the improvement of performance standards. It has become clear that the managerial system, which prevailed in the last two centuries, based on the concepts of the studies of Western Management scholars, like Frederick Taylor and Henry Fayol etc.. is a managerial model, which helps the organization run. But it tgnores the quality in performance. Therefore, it was natural for different organizations to find out modern managerial approaches and systems, which will enable them to increase their products and develop their services, and also solve the problems they face.

Thus the importance of the study stems from the fact that, it examines a new managerial concept, which has achieved a great success in both the private and public sectors. It has succeeded in the public sector in a number of developed countries like Japan and U.S.A, which always look forward for modern managerial models, which are expected to increase productivity and achieve quality. Moreover, the managerial scholars and professional staff do need to know and understand this pioneering managerial approach.

Hypotheses

The study seeks to investigate and test the following hypotheses:

1. Lack of quality culture among both of staff members and management, is the source of managerial failures.

2. Top management do not support the application of TQM programme application, and they are not in full commitment towards it.

3. RESEARCH METHODOLOGY

The research attempts to follow the descriptive analytical method and testing of hypotheses. The former provides information regarding the present situation of total quality management (T.Q.M) in Higher Education Institutions (HEIs) in a rather detailed manner, the latter, aims at developing hypotheses and empirically testing them, by using the T. test which calculate the mean and the standard deviation. These designs serve two purposes: to sharpen our knowledge of the subject and focus attention on more important facets of the problems, and to show more clearly the methods that will be used to analyze and point out the type of data needed for the study.

Precious Studies

In this Part, researcher reviews some contributions about the experience of applying total quality management. The Table 27.below summarizes these studies.

Table 27.1
Previous Studies

Author	Title	Findings
1. Gaffer Abdulla Mosa Ahmed Osman Ahmed Abdul Rahman (2012)	Applying total Quality Management in Higher Education Services for continuity Improvement Guaranteeing Input Quality and optaining Accreditation	Academic staff are aware about TQM requirements shortage of teaching facilities
2. A.M.A Hamdt	Challenges of Applying Total Quality Management systems in Higher Education Institutions	Strong relationships between top management and applying quality systems There is strong relationship between academic staff role and applying quality systems
3. A-A-ELmikhlafi	Measuring the perceived Quality and Expected Quality at Sattam University, Using the Service Qual Model	There is a difference in the level of perceived service quality and expect service quality There is a significant statistical difference between service quality perceived dimensions There is no significant statistical difference between expected service quality and quality dimension
4. Syed Sohib Zuair (2013)	Total Quality Management in Public sector Higher Education Institutions	1) TQM is being adopted in higher education institutions but at slower pace. 2) Areas of improvement include leadership, vision Ownership, Evalution Standardizations processes and Continuous Improvement.
5. Erkan Bayrakan (et. al.,) (2008)	An Instrument for Measuring the critical Factors of T.Q.M in Turkish Higher Education	There are 11 critical factors areas of TQM in HEls.

Author	Title	Findings
6. Namish (et. al.,) (2014)	Total quality management implementation in engineering education in India. An interpretive structural modeling approach	1) Development of Contextual relationship a man identified principles of TQM and the determination of their driving and dependence power through a single systematic framework.
7. Mandy Mok Kim and twoa Kato	Japanese Management and Total Quality Management The Application in Higher Education Institutions	1) The Japanese management style and TQM are only instrument to promote quality management. 2) The management system does not substitute to for actual polices or create miracles
8. Ehsan Sadeh and Mansour Garkaz (2015)	Explaining the mediating role of service quality management enables and students satisfaction in higher education institutes; the perception of managers.	1) Service quality should included as mediating elements in the quality management from work between quality enablers and student satisfaction.
9. Shu-Hsien (et. al.,) (2010)	Exploring TQM – Innovation relationship in continuing education A system architecture and propositions	1) Both, Quality and innovation are critical ingredients for competitiveness. 2) Continuity realized the relationship between TQM and innovation

Source: Designed By Researcher, 2016.

From the above table, we note that, the difference between the current research, and previous studies is that, it emphasized on accessing the application of T.Q.M. in higher education from two dimensions, first, quality culture, and secondly assessing the role of top management in applying the programme.

4. LITERATURE REVIEW

Definition of Total Quality Management

TQM is defined as modern managerial philosophy, which emerged during the three past decades, however, the term has enormous diversity in definition ,use, and importance, the same concept used for vastly different characteristics, issues and application areas.

According to Hellsten and Klefsjo (2000), TQM is a management system that is "a network of interdependent components working together to try to accomplish the aim of the system." TQM is aimed at embedding awarerress of quality in all organizational processes, and emphasizes continuous improvement and management of the organization by solving problems quickly and effectively. It is never complete and when working properly, all members of the organization were in process of getting better at what they do. For this reason, TQM is difficult to reduce to a few basic concepts, and any attempt to do so ultimately oversimplifies this apparently simple but obviously demanding philosophy. However, it is safe to say that most TQM programmes share certain characteristics. (Hamdi, 2006)

These characteristics include:

1. The need for top management commitment:

2. Extensive communication and training:

3. Customer orientation:

4. Zero defects and statistical quality control and

5. Continuous improvement.

Below, there are some TQM definitions, which are:

1. "TQM is a corporate business management philosophy which recognizes that customer needs and business goals are inseparable" British Quality Association, 1989 .

   This definition mentions that TQM is a management philosophy which relates customers need and the organization objectives.

2. "TQM is a way of managing to improve the effectiveness, flexibility and competitiveness of a business as a whole. It applies just as much to service industries as it does to manufacturing.

   It involves whole companies getting organized in every department, every activity and every single person at every " level".

   U.K Department of Trade & Industry booklet, 1991. Here, TQ T.Q.M has a broader concept, it uses to cover all departments of the organization, based on efficiency improvement.

3. "Total means that everyone in the organization is involved in the final product or Service to the customer. Quality means conformance to requirements. Management: TQM is a managed process, which involves people, systems and supporting tools and techniques, TQM is therefore, a change agent which is aimed at providing a customer – driven organization." Joan MacDonald, U.K Institute of management, 1993 This definition expresses each of three words separately, it concluded that, the T.Q.M is a change tool aimed at transferring the organization to be a customer driven.

4. "TQM is an overall umbrella term which embraces customer service, quality assurance, quality circles, and quality tools. It is a change from an output organization to a process organization. It is total involvement to delight customers´."

   S.A Khader, Director (TQM) NPC, india, 1995).

   Here, T.Q.M is also a broader concept, which is concerned with changing the organization from concentrating on output (results) to processes.

5. Total Quality Management is management with the workforce co-operating in the processes, developing, producing and marketing quality goods and services which satisfy customer's needs and expectations first time and every subsequent time."

   University of Leicester, Module 620, TQM (edition 10) This definition stressed employees role in serving and meeting the customers requirements and expectations.

6. "total Quality management is continuously satisfying customer requirements, at lowest cost, by harnessing the commitment of everyone in the organization."

   Dr. David Cook, PA Consultants, 1986

   Here, the definition call for customer orientation and full commitment of all people within the organization.

Total Quality Management, has many different definitions any scholar defiance it separately, therefore there, no one agreeable concept for the TQM term. Table 27.2 states TQM definitions of some scholars:

Table 27.2
Definitions of TQM

Definition	Scholar
"Total Quality is a defined as conformance to requirements."	Crosby (p.2,1967)
"A Total approach to put Quality in every aspect of Management."	Creech (p.6,1995)
"TQM is the integration of all functions and processes within an organization in order to achieve continuous improvement of the quality of goods and services."	Omachonu and Ross (p.3,2004)
"Quality is fitness for use."	Juran (p.2-2,1974)

Source: Zuhair, Syed Sohaib (2013), Total Quality management in public sector Higher Education Institutions, Journak of Business & Ecor Vol. 5, No. 1, ppt 24-55.

From the above presentation, it is clear that there is no one a greedable definition for Total Quality Management: therefore, the researcher introduces the following comprehensive definition:

TQM is a modern managerial philosophy, which starts with top management commitment, participation of all employees, communication so as to improve both processes and outcomes which satisfy customers requirements for the first time and at any other time.

Total Quality Management in higher Education Institutions

Now days, many organizations seek to improve their management system, in order to produce high quality product and services. However, higher education institution (HELs) are not exception in this movement, because they operate in the same environment, which in force them to adopt new managerial styles and approaches in order to cope with the changes and challenges of the environment, these changes are economical, cultural, technological, and social factors. As a result, of this situation, organizations work in open market, with a high degree of completion. The competition call the necessary of searching for excellence and high quality in order to survive and continue in a such market

According to Koch (2003) educators have proposed the used of T.Q.M approach to improving the education instructions service they provide. His or tide indicates that educations have looked at into T.Q.M for managing the education institution to improve their quality. However, successful applications of T.Q.M approach in education encourage, higher education instructions over the world to implement it, Narismhan (1987), mentioned, the first application of T.Q.M in U.S HELs was at Fox Valley Technical College (FVTC). T.Q.M helped FVTC to become more efficient in areas such as placement of graduates, employers satisfaction with contracted training programmes, acceptance of college credits at receiving institutions and improve in learning environment.

Tang and Zari (1998) indicated that higher education institutions (HELs) are known as quality institutions because they could do the best for their customers through applying TQM and increasing the service quality. It is clear that any successful iron plaemention of TQM programme will improve the education, and research, another services provided by these intuitions, the final result of this is customers satisfaction at the end.

Organizations, today confronts with dynamic environment and fast passed world, public sector or even the education sector is vastly influenced by management practiced the corporate or business world.

(Amin, 2006), and TQM is one such that has entered the public sector. It is an integrated management philosophy, its required to applied in all organizational levels. (Oakland, 2003).

TQM is naturally relevant to higher education because it is process focused approach that is aimed at increasing productivity, decreasing costs and improving quality (Jame and James, 1998).

Total Quality Management (TQM) attempts to effectively integrate different managerial concepts, which could end in understanding achievements for the organization (Sadeh and Garkaz, 2015). TQM, initially applied the Indus trial and manufacturing organizations, after its good performance and the outstanding results, service organization. Search to get benefit from applying TQM approach.

One of the important justifications for implementing Total Quality Management in higher education is the budget constraints, however, these are a huge decrease in budgets, although higher education's expensive.

The certified Quality organizational Excellence Handbook identified some advantages of applying TQM such as:

1. Improved competitive environment
2. Adaptability to changing environment
3. Increased level of productivity
4. Increased efficiency
5. Improved cost management
6. Higher customer orientation and satisfaction
7. Increased job security
8. Higher stak holder value
9. Better and innovative processes

5. METHODOLOGY

Data Analysis

In this part of research, researcher, reviews, the procedures of the data collection, analysis, and discussing these data and relating the information with hypotheses.

Data Collection

The data collected from Prince Sattam bin Abdulaziz University (PSAU), from the main Campus in Kharj province, where the headquarter located. The population is the academic staff members (about 1022 staff member). Researcher chooses random sample, 150 staff, members, the method of data collection is questionnaire, the returned sample was (94).

In this section of paper, research analyzes the data collected. Firstly, sample charactertic are discussed, secondly, Sample adequacy is checked, thirdly, reliability of the instrument is tested using corobach's Alpha and lastly, Statistical Package for Social Science (SPSS) used in order to analyze the data.

Reliability

Reliability; of the instrument was tested. Although, the instrument was originally used in a study in different countries and it was statistically reliable (Alpha was over 0.80 for all constructs). Still it is important to retest the reliability in Kingdom of Saudi Arabia context in order to ensure reliable analysis. Table 27.3 below gives the results of reliability check for each statement using Cranach's Alpha:

From the Table 27.below, it can be conclude that the instrument used is statistically reliable context as well and the Cronbach's Alpha for all the items was at least over 0.70, construct i.e., Other Stakeholders focus, from this construct the value of Cronbach's Alpha for this construct goes to 0.80, but this item is theoretically important in a way that the purpose of higher education reforms globally was to bridge the HEI and industry gap and strive for a knowledge based economy.

Table 27.3
The reliability of TQM Culture Indicators

No.	The statement	Factor
1	The university organizes training courses about the Quality management	0.77
2	The university sends news or messages about quality improvement.	0.77
3	The university organizes a competition for the best department in quality	0.71
4	Employees in the university understand TQM clearly.	0.78
5	Quality improvement policy in the university is written.	0.78
6	Quality improvement policy has clear objectives	0.73
7	Everybody in the university knows (understands) quality improvement policy.	0.86
8	All employees take quality improvement seriously.	0.73
9	Employees believe that quality improvement is their responsibility.	0.89
10	Employees are aware about the characteristics of the service quality.	0.84
11	The quality of our activities represents the main consideration of The university.	0.72
12	Everybody in the university believes in the need for quality.	0.88
13	Continuous quality improvement in will to increase in efficiency of resources utilization.	0.84

Source: questionnaire data analysis, 2016.

From the Table 27.above, it is clear that, the values are scattered among (0.89-0.71), which means that, the reliability of most of the statement is acceptable, statement number (9) obtins the highest value (0.89), and number three is the lowest value (0.71).

Table 27.4
The reliability of top management Indicators

No.	The statement	Factor
1	Top management encourage employees to offer high quality service.	0.9
2	Top management regularly review the quality of the work performed.	0.84
3	Top management require employees to improve their performance.	0.65
4	Top management represents idealism through their higher performance.	0.83
5	Top management review continuously the university progress towards its objectives.	0.88

No.	The statement	Factor
6	Top management are responsible for the success or failure of TQM programme.	0.72
7	Top management are responsible for improving quality.	0.79
8	Top management encourage employees participation in quality programme.	0.81
9	Top management support TQM programme.	0.71
10	Top management lead TQM revolution.	0.77
11	Top management think that TQM programme is difficult to apply.	0.81
12	Top management offer the required facilities for the TQM programme.	0.89
13	Top management change their objectives continuously.	0.76
14	Top management are aware about short term objectives only.	0.73

Source: questionnaire data analysis, 2016.

From the Table 27.above, the values are distributed between (0.9) and (0.65). Statement number (1) and (3) are obtained the highest and lowest values respectively. Whereas other statements located among the two values.

Measures of Sample Adequacy

In order to meet the requirements of running Factor Analysis, two tests were conducted to measure sample adequacy. These tests are Sampling Adequacy value of 0.92 is considered to be appropriate (Meritorious) for Factor Analysis.

Table 27.5
The validity Measurement of T.Q.M. culture

No.	The statement	Validity
1	The university organizes training courses about to the Quality management	0.874
2	The university sends news or messages about quality improvement.	0.871
3	The university organizes a competition for the best department in quality	0.875
4	Employees in the university understand TQM clearly.	0.874
5	Quality improvement policy in the university is written.	0.876
6	Quality improvement policy has clear objectives	0.898
7	Everybody in the university knows (understands) quality improvement policy.	0.929
8	All employees take quality improvement seriously.	0.813
9	Employees believe that quality improvement is their responsibility.	0.784
10	Employees are aware about the characteristics of the service quality.	0.922
11	The quality of our activities represents the main consideration of The university.	0.966
12	Everybody in the university believes in the need for quality.	0.974
13	Continuous quality improvement in will to increase in efficiency of resources utilization.	0.972

Source: questionnaire data analysis, 2016.

From, Table 27.5, we note that statement (12) scored the highest value (0.97), and Statement (8) scored the lowest value (0.78). The value of other statement are distributed among the tow values (0.970.78)

Table 27.6
The validity of measurement of top management roles

No.	The statement	Validity
1	Top management encourage employees offer high quality service.	0.974
2	Top management regularly review the quality of the work performed.	0.972
3	Top management require employees to improve their performance.	0.964
4	Top management represents idealism through their higher performance.	0.876
5	Top management review continuously the university progress towards its objectives.	0.898
6	Top management are responsible for the success or failure of TQM programme.	0.929
7	Top management are responsible for improving quality.	0.882
8	Top management encourage employees participation in quality programme.	0.899
9	Top management support TQM prorgamme.	0.896
10	Top management lead TQM revolution.	0.882
11	Top management think that TQM performance is difficult to apply.	0.882
12	Top management offer the required facilities for the TQM prorgamme.	0.852
13	Top management change their objectives continuously.	0.968
14	Top management are aware about short term objectives only.	0.898

Source: questionnaire data analysis, 2016.

From the Table 27.6, it is clear that the value of validity factors are distributed between (0.97) and (0.85) where, statement number (1) scored the highest (0.97) and statement number (12) is the lowest value with (0.85).

Research Conclusions

Here the researcher uses the T test in order to measure the mean, and standard deviation. Of the answers of the staff members to each section of the questionnaire.

The five alternative answers are given numerical value ranges as shown here below.

Table 27.7
Mean Value by using the T test

Neither agree nor disagree	0 less than 1
Strongly agree	1 less than 2
Some agree	2 less than 3
Strongly disagree	3 less than 4
Some disagree	4 less than 5

Source: questionnaire data analysis, 2016.

Measuring T.Q.M's Culture

From, the below table, most of PSAU staff members agree that, university organizes training programmes about T.Q.M (Mean is 3.63) (SD = 1.11), however, this statement is number eight among other statements. PSAU staff agree that university sends information and (such as news or messages) about quality improvement (Mean = 3.65, SD = 1.1), however, it rank, as number three. PSAU staff members, agree that, university

organizes competition for the best department in quality (Mean = 3.65, SD = 1.32, rank = 7) University staff agree that, employees understand total quality management clearly (Mean = 3.75 SD = 1.15, rank = 13) staff – members agree that, quality improvement policy is written (Mean = 3.1, SD = 1.22, rank = 11) PSAU staff members, strongly agree that, everybody understands quality improvement policy (Mean = 3.27, SD = 1.14, rank = 10), However, staff members, strongly agree, that all employees take quality improvement seriously (Mean = 4.05, SD = 1.08, rank = 1) PSAU staff members neither agree nor disagree that, employees believe that quality improvement is their responsibility (Mean = 2.7, SD = 1.15, rank = 13)

University staff agree, that employees are aware about the characteristics of service quality (Mean = 3.1, SD = 0.8, rank = 12) PSAU staff members, strongly agree that, the quality of their service represents the main consideration of the university (Mean = 4, SD = 1.12, rank = 2) .staff members agree, that, everybody in the university believe in the need for quality (Mean = 3.8, SD = 1.17, rank = 4). Finally, staff members, agree that, continuous quality improvement increase efficiency of resource of utilization (Mean = 3.7, SD = 1.26, rank = 6).

Table 27.8
Quality culture indicators

No	The statement	Mean	S.D	Ranking
1	The university organizes training courses about to the Quality management	3.6321	1.235	8
2	The university sends news or messages about quality improvement.	3.818	1.119	3
3	The university organizes a competition for the best department in quality	3.6585	1.321	7
4	Employees in the university understand TQM clearly.	3.751	1.15032	5
5	Quality improvement policy in the university is written.	3.1036	1.2245	11
6	Quality improvement policy has clear objectives	3.2746	1.3890	10
7	Everybody in the university knows (understands) quality improvement policy.	3.6062	1.287	9
8	All employees take quality improvement seriously.	4.051	1.0788	1
9	Employees believe that quality improvement is their responsibility.	2.7565	1.1537	13
10	Employees are aware about the characteristics of the service quality.	3.109	0.8742	12
11	The quality of our activities represents the main consideration of The university.	4.002	1.1249	2
12	Everybody in the university believes in the need for quality.	3.8442	1.17999	4
13	Continuous quality improvement in will to increase in efficiency of resources utilization.	3.7202	1.2683	6

Source: questionnaire data analysis, 2016.

Measuring the Role of Top Management

This section concern about measuring the role of top management in applying total quality management in Prince Sattam bin Abdul Aziz University, Table 27.9 shows the responses of staff members toward the five alternatives in the questionnaire. They are strongly agree that, top management encourage employees to offer high quality service (Mean = 4.19, SD = 0.9). Also, they agree that, top management regularly review the quality of the work performed (Mean = 4, SD = 0.91), top management ask employees to improve their performance (Mean = 4.17, SD = 0.91) they agree that, top management represent a positive model through their higher performance (Mean=3.86, SD=0.93) However, staff members are strongly agree that, top management review continuously the progress towards its objectives (Mean = 4.00, SD = 0.93).

Most of university staff members are strongly agree that top management are responsible for the success or failure of T.Q.M programme, which mean that university management play important role in applying the programme. (Mean = 4.21, SD = 1). Beside, that, staff members agree that, top management are responsible for improving quality, it mean that they are continuously improve in quality. (Mean = 3.4, SD = 1.21). However respondents agree that, top management encourage employees contribution in quality programme, they enhance employee through adopting incentive schemes. (Mean = 3.7, SD = 1.3).

In addition, respondents, are strongly agree that, top management support T.Q.M programme, important indicator is the presents of Quality deanship in the university. (Mean = 4, SD = 0.9). Also, respondents strongly agree that, top management lead the T.Q.M revolution, which mean that, that they give top priority for appling T.Q.M programme. (Mean = 4, SD = 1). PSAU staff members agree that, top management think that T.Q.M programme is difficult to apply, the researcher, note that, this represent one of the important challenges of applying the programme. (Mean = 3.8, SD = 1.23). Hence, respondents strongly agree that top management render employees with required facilities for T.Q.M programme application. (Mean = 4, SD = 0.9).

The respondent are neither agree nor disagree that, top management change their organizational gools continuously, which mean that respondent one not sure about objectives stability. (Mean = 2.8, SD = 0.9). In the last statement respondents agree that, top management are aware about short – term objectives, this point is in contrast to total quality programme, which is strategic long term programme, which needs top management commitment. (Mean = 3.8, SD = 1.2).

Table 27.9
The role of top management indicators

No	The statement	Mean	S.D	Ranking
1	Top management encourage employees to offer high quality service.	4.1917	0.90688	2
2	Top management regularly review the quality of the work performed.	3.8083	0.83512	11
3	Top management require employees to improve their performance.	4.1762	0.91859	3
4	Top management represents idealism through their higher performance.	3.8601	0.93881	8
5	Top management review continuously the university progress towards its objectives.	4.0933	0.91947	7
6	Top management are responsible for the success or failure of TQM programme.	4.2124	1.0076	1
7	Top management are responsible for improving quality.	3.4041	1.21723	13
8	Top management encourage employees participation in quality programme.	3.76717	1.3366	12
9	Top management support TQM prorgamme.	4.0363	0.90929	5
10	Top management lead TQM revolution.	4.0259	1.0074	6
11	Top management think that TQM performance is difficult to apply.	3.8187	1.23037	9
12	Top management offer the required facilities for the TQM prorgamme.	4.03663	0.90354	4
13	Top management change their objectives continuously.	2.7772	0.90354	14
14	Top management are aware about short term objectives only.	3.777	1.18897	10

Source: questionnaire data analysis, 2016.

Research Findings

The purpose of this research is to assess the application of Total Quality Management as a managerial method or tool for improving the management performance of Prince Sattam university is used as an example of the higher education. The research hypotheses are rejected using the T-test.

Thus, Total Quality Management's concept and culture and culture are widely distributed among the employees of university. However, the top-management of university support the application of T.Q.M programme, and are in full obligation towards it, Also the employees are in full commitment and acceptance of the T.Q.M programme.

T.Q.M Culture

Table 27.shows the results of the T test for the T.Q.M culture among employees of university .

It is clear that most of the employees of university either strongly agree or some agree that T.Q.M culture is widely distributed and known to them.

Therefore, there is full information available to them, about quality. The university organizes courses for all staff members in order to make them aware about it. It sends news and messages about quality improvement, and there is competition for the staff member. Employees have a clear understanding of T,Q,M quality improvement policy because it is clearly written. Moreover employees take quality improvement policy seriously, beside that they believe that it is their responsibility.

Employees define (know) the characteristics of the service quality and productivity policy, and they believe that the quality of their activities represent the main consideration of university. In addition to that, everybody in the university believes in the need for quality, and that quality improvement will lead to the increase of efficiency in resource utilization.

The Roles of Top Management

Most Staff members of the university either strongly agree or some agree that top- management encourage and facilitate the application of T.Q,M programme.

Staff members strongly agree that top management lead T.Q.M revolution ,are responsible for the success or failure of the programme, regularly review the work performed, and require Staff members participation in the quality programme.

Staff members agree that, top- management offer idealism through their higher performance, require Staff members to improve their performance, review continuously university progress towards its objectives, besides encouraging staff members to offer high quality service, and supplying the required facilities for the T.Q.M programme.

Also, most of the staff members agree that, top-management think, that T.Q.M programme is difficult to apply. They change their objectives continuously, and they are aware about short-term objectives only.

The research findings and conclusions are:

1. T.Q.M concept is learnt and understood by most of the staff members of university. This represents a key factor for the success of the programme. The administration attain that through seminars and workshops, which cover all units and departments of university.

2. There is a competition for the distinctive staff member of the departments in quality, which results in increasing the overall performance of the university.

3. University has a clear, written quality improvement policy, which is known to all employees of university.

4. Most of the employees understand that quality improvement is their responsibility.

5. Employees define the characteristics of the service quality and productivity policy. Besides that the quality of activities represents the main consideration of the university.

6. Every employee in university believes in the need for quality. In addition to that, improvement in quality will lead to increased efficiency in resource utilization.

7. Top management has full obligation toward the T.Q.M programme. Hence, it leads the T.Q.M. revolution, beside that it provides the required facilities for the application of the programme. Top management asked employees to improve their performance, in addition to that, they represent idealism or model through their higher performance.

8. Top management encourage employees to participate in the T.Q.M programme and in the goal setting process.

9. Top management change their objectives continuously, besides that they concentrate on the short-term objectives.

10. Top management think that the T.Q.M programme is difficult to apply. Therefore, they give it special care.

6. RECOMMENDATIONS

In order to apply the T.Q.M programme successfully, the researcher recommend the following.

1. T.Q.M is a strategic programme, which needs time for achieving its goals, therefore, the top-management should keep in mind this fact, and understand that it is a long term journey, which needs continuous commitment.

2. The T.Q.M programme needs gradual application planning, I.e. it requires certain steps in order to be applied which are:

    1. Analyzing the current situation and determining the strength and weaknesses of the institution.

    2. Developing the quality standards and criteria.

    3. Training employees on the above quality standards and criteria and applying them gradually.

    4. Continuous evelation and controlling.

3. Continuous training programmes are essential for implementing the programme, especially for the first line employees.

4. Establishing a quality consulting unit, as an advisory body for top management on quality affairs and issues.

5. Studying the experiences of the application of the T.Q.M programme in United States and Japan taking into consideration the cultural, economical, and technological differences.

6. Using the teamwork system.

7. The necessity of objectives stability .

8. Top management must concentrate on long term objectives rather than short term ones.

Further Research

Further research, can be on the effects of T.Q.M on the organizational performance.

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