

Organizational Approach to Total Quality Management: A Case Study

Rafikul Islam* and Mohamad Reeduan Mustapha

Abstract

The Malaysian Administrative Modernization and Management Planning Unit (MAMPU) has outlined Total Quality Management (TQM) by means of seven core principles: (1) top management commitment, (2) strategic quality planning, (3) customer focus, (4) training and recognition, (5) enhancing teamwork, (6) performance measurement, and (7) quality assurance. Malaysian organizations are encouraged to apply these core principles in order to attain competitive advantage in the marketplace. The present study has made an attempt to survey the level of awareness and implementation of these principles in a typical Malaysian organization. The data has been collected through a questionnaire survey and interviews. Seventy two of the total of 125 employees of the organization participated in the survey. Details of the findings are discussed and implications are highlighted.

Keywords: Total Quality Management (TQM), Implementation, Case Study, Malaysia

JEL classification: M11, L15

1. Introduction

The concept of Total Quality Management (TQM) was introduced in the 1920s when statistical approach was first used in quality control in the factories in America. This concept was later introduced to the corporate managers in Japan in the 1950s, at a time when the country was gearing itself towards industrial development. This concept received a further impetus in the 1980s with the increasing awareness worldwide of the importance of quality.

* Corresponding author. Rafikul Islam is a Lecturer at the Department of Business Administration, International Islamic University Malaysia, Jalan Gombak, P.O. Box 10, 50728 Kuala Lumpur, Malaysia, email: rislam@iiu.edu.my. Mohamad Reeduan Mustapha is Operations Manager, Courts Mammoth Berhad, No 36, Jalan Genting Kelang, Setapak, 53300 Kuala Lumpur, Malaysia, email: reeduan@accamail.com.

According to the Malaysian Administrative Modernization and Management Planning Unit (MAMPU), TQM is “a continuous process that involves the whole organization and customer driven”. This process is aimed at creating a culture of excellence in any organization. Hence, TQM can be seen as a process of cultural transformation through which the existing elements of the culture are modified, replaced or strengthened with better elements. These elements encompass values and attitudes, systems and procedures, operational practices, organization structure and so forth.

According to DELIVERI Project¹, TQM is “a client-oriented approach that introduces systematic management changes and continuous improvements to an organization’s processes, products, and services”. The word “total” in Total Quality Management means that everyone in the organization must be involved in the continuous improvement effort, the word “quality” shows a concern for customer satisfaction, and the word “management” refers to the people and processes needed to achieve the quality. TQM can be seen as a change in management style that aims to continuously increase value to customers by designing and continuously improving organizational processes and systems. For Dahlguard *et al.* (1998), TQM is “a corporate culture characterized by increased customer satisfaction through continuous improvements, in which all employees in the firm actively participate”.

The objective of the present paper is to report the findings of a survey on implementation of TQM programmes in a typical Malaysian company. The organization of the paper is as follows: Section 2 provides the core principles of TQM. A brief review of some of the recent literature on TQM case studies has been provided in Section 3. Since the present survey pertains to a single organization case study, in the review, emphasis has been placed on the case studies that have been conducted on single organizations. Research methodology and data analysis are provided in Sections 4 and 5, respectively. Analysis of the data from the open-ended questions is also provided in Section 5. The final section provides the conclusions of the paper.

2. The Core Principles of TQM

This section reviews and discusses the seven core principles of TQM as outlined by MAMPU in the Development Circular (DAC) No. 1 of 1992, entitled “Guide on Total Quality Management in the Public Service”. These principles are: (1) top management support, (2) strategic quality planning,

¹ A cooperation between “Department for International Development, United Kingdom and Government of Indonesia.

(3) customer focus, (4) training and recognition, (5) enhancing teamwork, (6) performance measurement, and (7) quality assurance.

The first principle is top management support. Total quality is a management-led process. As a result, success in its implementation depends on the demonstration of top management's commitment. According to Ross (1995), the commitment and involvement of management needs to be demonstrated and visible. Commitment means a willingness to devote resources to TQM, to invest in the programme, and the willingness to invest now in order to reap benefits later (Kelly, 1994). A commitment to total quality means a willingness to change the style (and culture) in which the company operates, which may mean changes in the company's management philosophy or new relationships between managers and their subordinates.

The second principle is strategic quality planning. It plays a vital role in ensuring quality outputs (products or services) of an organization. By undergoing the process of strategic planning, organizations are able to identify their strengths and weaknesses and thereby formulate appropriate strategies in line with the changing environment so as to meet customer requirements. As outlined by MAMPU, strategic quality planning involves five steps, which are: external environment analysis, internal environment analysis, formulation of organization vision, formulation of quality objectives, and identification of improvement activities.

The third principle is customer focus. Quality is conformance to customer requirements. To achieve maximum customer satisfaction, every employee, supervisor, and manager must develop a passionate commitment to meeting customer requirements, which is the key to quality and profitability (Miller, 1995). A strong commitment and involvement of managers, supervisors, and employees in the customer focus process will assure quality, cost reduction, and gain competitive advantage for the organization concerned.

The fourth principle is training and recognition. According to MAMPU, successful implementation of TQM depends on the support and participation of a skilful and knowledgeable workforce with positive attitudes and values towards work. This requires continuous training and recognition of a system that motivates the workforce to produce high quality outputs. For TQM organizations, where employee involvement in decision-making, work-team, self-direction, customer focus, partnership, and continuous improvement rise from clichés to core realities, training is more than useful – it is essential and extremely important.

Recognition is an appreciation of the contributions of the employees and work teams to the being of the organization as a whole. The contributions of employees over the years cannot be ignored. Due recognition and appreciation in various forms should be in place.

The fifth principle is enhancing teamwork. Teamwork among employees of a department is a unifying force in ensuring success of the department's quality improvement efforts. According to Judith (2004), the most common vehicle for employee participation is a team. Gilbert (1992) posits that "teams do most things better than individuals because the members stimulate each other; they possess a broader range of skills, and anyway, working in a team can be more fun". As outlined by MAMPU, teamwork enhances three key aspects of the quality improvement process: facilitates free exchange of information and ideas, builds up trust among the employees, and improves communication within the department.

The sixth principle is performance measurement. Measurement is one of the most critical functions in quality assurance. According to MAMPU, a performance measurement system provides important data and information to management on the current performance of a work process that is being implemented. This information can be utilized in several ways, some of which are: evaluating present performance of a particular work process, measuring process conformance, that is, the extent to which the present work process meets the pre-established quality standards and objectives, identifying the segment of a work process that has quality problems, and planning for improvement activities to further upgrade the quality of work. Evans and Lindsay (2005) further concurred that successful companies around the world have shown that if a total quality control philosophy is to be implemented, it is essential that employees at every level be trained in basic statistical problem-solving techniques.

The seventh principle is quality assurance. According to MAMPU, quality assurance focuses on planned and systematic actions for the prevention of quality problems to ensure the production of defect-free outputs. Asli (1999) stated that in overcoming the limitations of quality inspection and quality control approaches, many organizations have turned to quality assurance as an alternative. Therefore, quality assurance involves the planning and the management of the right method in the production of goods or rendering services.

In short, TQM is a management philosophy that emphasizes continuous improvement of processes, people and the overall system in an organization to maximize customer satisfaction. Although, MAMPU's formulated TQM principles were originally meant for public service organizations, they can also be applied across all types of organizations due to the generic nature of the principles outlined above.

3. Literature Review

Numerous TQM case studies have been conducted over the years and across all kinds of organizations, and results have been published in many

journals. The literature has been so pervasive that even providing a brief account of it is prohibitive. What we have provided in the following is a review of a few selected recent publications on TQM case studies. As mentioned before, special emphasis has been placed on the cases that have been conducted on single organizations.

Manjunath *et al.* (2007) presented a case study of quality management practices in a South Indian hospital. Following the Malcolm Baldrige National Quality Award (MBNQA) criteria framework, the authors conducted in-depth interviews with the top management of the hospital and assigned weights to the seven criteria of the Award. The hospital obtained 753 out of the total 1,000 points, which reveals that good management practices are in place in the hospital. The authors conclude that healthcare organizations should use MBNQA as a self-assessment tool to evaluate and to improve the overall health of the hospitals.

MBNQA is a comprehensive framework for quality management, which has been the benchmark model for many national level quality awards in the world. Following the successful launch of MBNQA in 1988 in the US, the Brazilian National Quality Award (BNQA) was launched in 1992. In turn, the BNQA has been the model of quality management for many companies in Brazil. Miguel (2006) has reported a case study on a Brazilian hospital that has applied the BNQA framework. The author has shown that the introduction of the quality management framework based on a national quality award enhanced quality awareness and improved service quality and organizational performance. In addition, the use of the framework at the hospital supports organizational leadership in the journey towards quality excellence.

Many hospitals have implemented TQM programmes and achieved good success; such a hospital is St. Mary's in Grand Rapids, Michigan. Motwani *et al.* (1999) conducted a year-long case study and identified the following success factors in the TQM programme at the hospital: (1) an organizational structure and leadership commitment for identifying and improving processes, (2) use of data-based statistical and analytical tools to study processes, (3) employee empowerment, (4) involvement of internal and external customers through the improvement process, and (5) development of effective measures for monitoring improvement. The authors comment that the benefits accrued from the TQM efforts have been remarkable.

Rahman and Tannock (2005) reported three case studies undertaken at SME companies in Malaysia. The studies provide insights into the issues facing SMEs that are trying to develop more advanced quality management approaches. They have found that the companies have adopted distinct approaches to the implementation of TQM, which could be shared by other SMEs. Some of the key issues that have been addressed by the companies under study are: top management commitment, an effective steering

committee engaged in policy and planning management, employee involvement, employee rewards and skill development.

Hansson (2001) discussed various aspects of TQM implementation in a number of small organizations in Sweden. His study reemphasizes the importance of committed leadership and employee participation. Small organizations were found facing hurdles towards process orientation. Specifically, small organizations find considerable difficulty in implementing 'fact based decisions' and 'continuous improvement'. However, according to the researcher's findings 'leadership', 'employee commitment' and 'customer focus' have all permeated across the organizations surveyed.

Many times it has been observed that companies start adopting TQM programmes, but do not persist in its implementation (Venkateswarlu and Nilakant, 2005). The authors explored the factors that influenced the success and continuity of TQM programmes in some organizations in New Zealand. They conclude that the factors that are critical to pursue continued implementation of TQM programmes are: compulsions for change, core philosophy, commitment of senior management, capability, experience and fit of TQM champion, collateral changes and continuity of leadership.

Managerial commitment and organizational leadership are regarded as key elements in TQM implementation. However, in literature there is scant evidence that distinguishes between commitment and leadership. Guillen and Gonzalez (2001) agree that the terms are not the same; in fact, commitment is considered a narrower term than leadership. By means of three case studies, the authors have shown that management leadership can be an explanatory variable of the level of TQM implementation in a firm.

Rao *et al.* (2004) have outlined TQM application in a small company and shown how TQM has saved this company from the verge of bankruptcy. Specifically, implementation of TQM in this company has resulted in (1) reduction of product returns from over 7% of sales to less than 1%; (2) reduction of rework from over 1 million pounds to less than 150,000 pounds. Taylor (1998) investigated the impact of the organization's size on TQM implementation. Their findings do not confirm that TQM implementation is poorer in small firms. The findings also reiterate the utmost importance of 'data and information, and hence management' in successful TQM implementation.

Lai *et al.* (2004) examine the factors that encourage firms in the Hong Kong logistics industry to implement quality management systems (QMS) to ensure quality in their work processes. Based on a case study, the authors introduced a generic ten-step approach for QMS implementation. The steps are: management commitment, quality improvement team, quality measurement, quality awareness, manager and supervisor training, goal

setting, error cause removal, corrective actions, recognition and reward, and continuous improvement.

Dadzie's (2004) study stressed the important role of top management in an organization and examined the possibilities, challenges, and constraints posed to librarians in the provision of quality service to the university community in Ghana. Using a case study approach, the research concluded that top management were fairly committed but were too financially handicapped to fulfil all the strategies and policies outlined.

Singh and Desmukh (1999) conducted a case study on a consultancy and technology transfer wing (CTFW) in an educational institute of national importance and applied various tools such as customer surveys, brainstorming sessions and quality function deployment to determine the present status of the CTFW on the quality management issues. On the basis of survey findings, the authors conclude that improved customer service, good marketing coupled with the practice of quality management will enhance the visibility of CTFW to the commercial world, resulting in increased business activities.

4. Research Method

The present case study has been conducted on a Malaysian company, which is a distributor of Touch 'n Go cards and owns and operates its Touch 'n Go Electronic Payment System. The company is considered as the fourth largest e-purse system in the world. There are currently 2.4 million Touch 'n Go cards in circulation in the country and the company's central clearinghouse. The system clears more than 800,000 transactions daily. In order to show commitment to quality and customer satisfaction, the company has implemented TQM in all its operational areas. One of the authors of the present paper has over five years working experience in the company. According to Ghobadian and Galear (1996), the inherent characteristics of SMEs in some key areas such as market focus, proximity of individuals and corporate goals, the extent of the functional integration, employee awareness, and team spirit, are likely to be closer to the requirements of the TQM environment. All the characteristics are present in the company.

The company started showing interest in the implementation of TQM programmes in the 1990s and received ISO certification in 2000. Training programmes are periodically organized for the employees to sharpen their quality management skills. These training programmes are mostly facilitated by outside trainers. The staff are empowered to make decisions ensuring better quality customer service. Implementation of TQM programmes at this company has been spurred by a high rate of employee involvement and participation. Since it is a single organization case study, the company did not authorize us to disclose its identity. Therefore, in

order to refer to the company, we have used a fictitious name whose acronym is AHM. Following are the two methods of data collection for the present study.

Questionnaire: Using the MAMPU framework of TQM, a structured questionnaire was formed and administered on the company. Reasonable details of the framework have been provided in Section 2. In this framework, it is assumed that implementation of the basic elements of TQM will entail customer satisfaction.

The questionnaire was designed to elicit information from all employees of the organization. Open-ended and closed-ended – both types of questions have been included in the questionnaire. Open-ended allows the respondents to provide their own answer to the question using their own words. By using closed-ended question, respondents can choose an alternative answer from among the several available alternatives.

Interviews: Personal interviews were conducted with the key officer, who specializes in Total Quality Management for the organization. The purpose is to get an opinion on how TQM had impacted the organization.

Table 1. Various categories of respondents

Category	Communicated	Actual	Percentage of Response
Managerial, Supervisory, and Executives	40	36	90.0
Non-executives (clerks, typists, stenographs and personal secretaries, office boys, guards, etc)	58	34	58.6
Contract workers	2	2	100.0
Total	100	72	72.0

A questionnaire survey instrument was used to collect the detailed information on the status of TQM implementation in the company from the employees' perspective. On the other hand, interviews were conducted to elicit information on specific TQM programmes from the quality manager.

Organizational Approach to Total Quality Management: A Case Study

Table 2. Respondents' demographic information

Variable	Frequency	Percent
Gender		
· Male	40	55.6
· Female	32	44.4
Age group		
· 20 years or below	2	2.8
· 21-25 years	9	12.5
· 26-30 years	33	45.8
· 31-35 years	15	20.8
· 36-40 years	6	8.3
· 41-50 years	6	8.3
· 51 years and above	1	1.4
Religion		
· Muslim	61	84.7
· Christian	1	1.4
· Buddhist	4	5.6
· Hindu	6	8.3
Highest level of education		
· Certificate/Diploma	46	63.9
· Professional	2	2.8
· Bachelors	20	27.8
· Masters	4	5.6
No. of years served in the company		
· less than 2 years	22	30.6
· 3-4 years	29	40.3
· 5-6 years	7	9.7
· 7 years and above	14	19.4
Working Department		
· BD*	3	4.2
· EDSA*	7	9.7
· FIN	10	13.9
· HRAD	13	18.1
· MKTG	5	6.9
· OPS	28	38.9
· TECH	6	8.3
Employment Category		
· Managerial	9	12.5
· Supervisory & Executive	27	37.5
· Non-executive	34	47.2
· Contract workers	2	2.8

*BD = Business Development; EDSA = EPS Development and Security Audit.

AHM has a total of 125 employees. To achieve a fair level of representation, one hundred (100) employees covering all categories and departments were selected. In addition to this, thirteen employees were selected for a pilot study. Respondents for both (pilot test and modified questionnaire) were selected using the proportionate stratified random sampling method.

The breakup of the 100 respondents for the questionnaire survey is shown in Table 1.

Seventy two (72) employees who responded represent 72 percent of the total number of respondents contacted. These 72 respondents constitute more than 50 percent of the total number of employees in the organization and, consequently, we can consider them as representative of the whole set of employees. The profiles of the respondents are shown in Table 2. The data has been analyzed using SPSS version 12.0.

5. Data Analysis

In Part A of the questionnaire, the respondents were asked to answer (Yes or No) to a number of questions. The responses are summarized in Table 3.

Table 3. Summary of responses to a number of questions in Part A of the questionnaire

No.	Item	Response			
		Yes	%	No	%
1	Have you heard of Total Quality Management (TQM)?	70	97.2	2	2.8
2	Are you aware of the basic principles of TQM?	70	97.2	2	2.8
3	Has your company started implementing TQM?	70	97.2	2	2.8
4	Does your organization focus on continuous improvement of products or services?	45	62.5	27	37.5
5	Does your organization focus on continuous improvement of processes?	45	62.5	27	37.5
6	Does your organization focus on continuous improvement of people?	36	50.0	36	50.0
7	Are you aware of ISO 9000 series?	61	84.7	11	15.3

As we observe from Table 3, 97.2% ($p < 0.0001$) of the respondents have heard of Total Quality Management and they are aware of its basic principles. The same percentage of respondents also said that their company has started implementing TQM. This shows that the company has educated its employees by means of various seminar/training programmes. This is in contrast with the findings obtained by Rahman (2002). According to Rahman (2002), the main difficulties facing Malaysian SMEs are employees' inadequate knowledge and understanding of quality. We also observe that 62.5% ($p = 0.017$) of the respondents agree that the organization focuses on continuous improvement of products/services and processes. But only 50% view that the organization focuses on continuous improvement of people. Therefore, the organization needs to invest more to enhance employees' skills on a continuous basis. Finally, 84.7% ($p < 0.0001$) of the respondents are aware of the ISO 9000 series, as the company was awarded the QMS in 2000.

5.1. Analysis of TQM Principles in Company A

For statements 1-26 in Part B of the questionnaire, respondents were asked to indicate their perception of TQM principles in their organization on a five-point scale, where 1 indicated "strongly disagree" and 5 indicated "strongly agree". The details are shown in Table 4.

Although sometimes the agreement/disagreement with the statements may be clear from the corresponding mean values, statistical testing reconfirms the findings with confidence. Therefore, all the statements are statistically tested using the following null and alternative hypotheses:

$$H_0: \mu = 3.0 \text{ (mean 3.0 indicates that the respondents are neutral)}$$
$$H_1: \mu \neq 3.0$$

The p-values are shown in the last column of Table 4. On the basis of the test results, we have the following observations.

The majority of the respondents agreed that Company AHM is highly focused on customer satisfaction and looks for customers' feedback. The company obtains customer feedback through surveys and customer service centre. The majority of respondents believe that customer satisfaction is the driving force that propels the company. It understands its customers' needs and constantly seeks new solutions to achieve customer satisfaction. However, some people in the company strongly disagree that its customers dictate the quality of its products and services.

Although most of the employees agreed that AHM is highly focused on customer satisfaction, there is no formal effort to measure customer satisfaction. Taylor (1998) also found a low level of customer satisfaction measurement activity in smaller organizations compared to larger organizations.

Table 4.

Employees opinion on applications of TQM principles at AHM	N	Min	Max	Mean	Std. Deviation	95% Confidence Interval t-test of the Difference		df	Sig. (2-tailed)	
						Lower	Upper			
1. Our organization is highly focused on customer satisfaction.	72	3	5	4.13	.786	3.94	4.31	12.143	71	.000
2. There is general staff knowledge of Principles of TQM.	72	3	5	3.63	.701	3.46	3.79	7.567	71	.000
3. Our Chief Executive himself gets involved with quality.	72	3	5	4.00	.712	3.83	4.17	11.916	71	.000
4. Our Senior Executives are personally and visibly involved with quality.	72	3	5	3.63	.701	3.46	3.79	7.567	71	.000
5. Customer satisfaction is the driving force that propels our organization existence.	72	2	5	3.62	.999	3.39	3.86	5.308	71	.000
6. Our customers dictate the quality of our products and services.	72	1	5	3.38	1.326	3.06	3.69	2.399	71	.019
7. Employees are empowered and are participating in decision-making.	72	2	4	3.38	.701	3.21	3.54	4.540	71	.000
8. There is willingness of employees to offer feedback for improvement.	72	2	4	3.50	.712	3.33	3.67	5.958	71	.000
9. Our employees know with explicit detail what they need to do to achieve and exceed defined targets.	72	2	4	3.38	.863	3.17	3.58	3.687	71	.000
10. In our organization, there is high employee morale.	72	3	5	3.75	.666	3.59	3.91	9.554	71	.000
11. We have a culture where mistakes are accepted as part of the learning process, and drive towards excellence.	72	2	4	3.12	.786	2.94	3.31	1.349	71	.182
12. There is pride in the job as achievements are highlighted openly and rewarded.	72	1	4	2.75	.835	2.55	2.95	-2.541	71	.013

Organizational Approach to Total Quality Management: A Case Study

13.	We are not complacent but have sustained the improvement of our organization.	72	3	5	3.75	.666	3.59	3.91	9.554	71	.000
14.	We understand our business and our people.	72	4	5	4.13	.333	4.05	4.20	28.663	71	.000
15.	There is a high level of teamwork in our company.	72	2	4	3.50	.872	3.30	3.70	4.865	71	.000
16.	Everyone in our organization at all levels, and in all departments is conscious of quality.	72	3	4	3.63	.488	3.51	3.74	10.878	71	.000
17.	Senior Executives have demonstrated a change in behaviour to reinforce the quality message.	72	2	4	3.38	.701	3.21	3.54	4.540	71	.000
18.	Suppliers actively participate in achieving quality.	72	2	4	3.12	.604	2.98	3.27	1.757	71	.083
19.	Our organization sees TQM education as essential for everyone.	72	3	4	3.50	.504	3.38	3.62	8.426	71	.000
20.	Employees are educated on the principles of total quality and the need to get it right first time and always.	72	3	4	3.37	.488	3.26	3.49	6.527	71	.000
21.	Information is made generally available in our organization.	72	2	4	3.00	.872	2.80	3.20	.000	71	1.000
22.	There is a high organizational quest for customers' feedback.	72	3	4	3.63	.488	2.80	3.74	10.878	71	.000
23.	Our processes are highly interlinked.	72	4	5	4.01	.118	3.99	4.04	73.000	71	.000
24.	There is a commitment of adequate resources to total quality.	72	3	4	3.75	.436	3.65	3.95	14.595	71	.000
25.	There is general knowledge about ISO 9000 in our organization.	72	3	4	3.88	.333	3.80	3.20	22.293	71	.000
26.	There is a high level of awareness about TQM in our industrial sector.	72	3	4	3.12	.333	3.05	3.20	3.185	71	.002
	Vald N (listwise)	72									

Employee involvement in AHM is very high. The majority of respondents agreed that employee empowerment is very important to fulfil the customer needs. All staff are empowered to do their job, especially in promoting the use of the product and providing good services to customers. However, most of the respondents disagree on the availability of information when it is required.

In the company, many people are knowledgeable about the TQM principles as the company considers TQM education as essential for everyone. Employees are educated on the principles of total quality and the need to get it right first time and always. Further, there is a commitment of adequate resources to total quality in the company.

Training is required to enhance an individual's work-related knowledge, skills, understanding, and motivation. At the company, instead of in-house training programmes, mostly, external consultants are involved to conduct training and continuous learning programmes.

By conducting training and learning programmes, employees in AHM know in explicit detail what they need to do to achieve and exceed predetermined targets. They can also improve a product or service by continually improving the process by which it is made/rendered. Realizing customers' needs are not static, AHM improves its products and service continually in order to compete in the marketplace.

The company not only focuses on the customer needs but also strives to create a good relationship with the suppliers. However, the majority of respondents disagree that suppliers actively participate in achieving quality. They might think that external parties such as suppliers do not contribute to quality in the company. However, in order to fulfil the company's quality goals, it is important to ensure quality in the suppliers' offerings. Once the process chain starts on the 'wrong foot', the end result will be a product or service having inferior quality.

5.2. Success of TQM programmes at Company A

In response to the question whether or not TQM programmes in the company have been successful, 62.5% of the respondents answered in the affirmative. This shows that the majority of the respondents hold the view that TQM programmes have been successful. A proportion test has been performed to confirm the finding statistically.

H_0 : The majority of the respondents do not consider that the TQM programmes have been successful.

H_1 : The majority of the respondents consider that the TQM programmes have been successful.

The test parameter is \hat{p} and the sample size is large enough so that

$$\hat{p} \text{ is } N \left(p, \sqrt{\frac{p(1-p)}{n}} \right)$$

At the $\alpha = 0.05$ level of significance and with a one tailed test in the positive direction, the critical value $Z_{0.05} = 1.65$. The value of test statistic

$$Z = \frac{\hat{p} - \mu_p}{\sigma_p} = \frac{\hat{p} - p_0}{\sqrt{\frac{p_0(1-p_0)}{n}}} = 2.12$$

Table 5. Factors that contributed to the success of the TQM programmes

No	Factors	Frequency	Percentage
1.	Top Management Commitment	7	15.6
2.	Strong Leadership	5	11.1
3.	Employee Empowerment	6	13.3
4.	Total Involvement and Participation	28	62.2
5.	Cooperation and Teamwork	9	20.0
6.	Training and Education	10	22.2
7.	Effective Communication and Feedback Mechanism	3	6.7
8.	Focus on Customer Satisfaction	8	17.8
9.	Reward and Recognition	6	13.3
10.	Adequate Planning and Monitoring	7	15.6

(This table is developed based upon 45 respondents)

Since $Z = 2.12 > 1.65$, the null hypothesis is rejected. This means that the majority of the respondents believe that TQM programmes in AHM are successful.

5.3. Critical Success Factors

Those respondents who considered the TQM programmes at the company as successful, were asked to provide their opinion regarding, which factors contributed to the success. The results are shown in Table 5. From the table, it is clear that the following factors contributed to the success of the programmes:

- Total involvement and participation
- Training and education
- Cooperation and teamwork
- Focus on customer satisfaction

On the other hand, the respondents who considered the programmes failed provided the following factors that are lacking and contributed to the failure (details are shown in Table 6):

- Training and education
- Adequate planning and monitoring
- Total involvement and participation
- Top management's commitment
- Focus on customer satisfaction

The findings are somewhat contradictory. Therefore, in the course of obtaining a consensus of opinion on the success of the TQM programmes the management of AHM needs to look into the following factors:

- Training and education
- Top management's commitment
- Awareness of TQM programmes implementation
- Adequate planning and monitoring
- Focus on customer satisfaction

Table 6. Factors that were lacking and contributed to the failure of the TQM programmes

No	Factors	Frequency	Percentage
1.	Top Management Commitment	7	25.9
2.	Strong Leadership	5	18.5
3.	Total Involvement and Participation	8	9.6
4.	Cooperation and Teamwork	4	14.8
5.	Training and Education	10	37.0
6.	Focus on Customer Satisfaction	6	22.2
7.	Reward and Recognition	3	11.1
8.	Adequate Planning and Monitoring	9	33.3

(This table is developed based upon 27 respondents)

Haksever (1996) pointed out two serious problems faced by small business managers when trying to implement TQM. They were the owner/manager's lack of business experience and knowledge, and the shortage of financial and human resources required. These two major problems can lead to others, such as reduced training budget that further hinders the

Table 7. Key things employees want to achieve

No	Key Things	Frequency	Percentage
1.	Contribute to company's increased revenue/profit	11	25.00
2.	Reward and recognition, i.e., bonus/ recognition for a job well done	9	20.45
3.	Help retaining quality certification		
4.	Ensuring success	2	4.54
5.	Improvement actions, i.e. the chance to do great work, the chance to work with interesting, motivated and responsible people	8	18.18
6.	Accountability	3	6.82
7.	Help achieving company goals	1	2.26
8.	Upgrade/enhance company systems	5	11.40
	Understanding the needs of company customers	4	9.09
		1	2.26

progress of TQM adoption. Struebing and Klaus (1997) pointed out two factors that could improve the probability of TQM success in small businesses. The first was having realistic expectations, although companies should be able to see immediate gains in the short term; greater benefits are achievable in the long term. They should not expect to solve all their problems in one go.

5.4. Key things employees want to achieve

At the end of the questionnaire, the respondents were asked a few open-ended questions of which one is, 'what are the key things you want to achieve in your company?' As expected, answers came in a variety of forms and are shown in Table 7.

Eleven respondents (or 25.0% of the total responded to the question) indicate that increased profit and revenue are the key things they want to see in the company. Employees at AHM need to look at how they can help the company by reducing operating costs. The second thing employees want most in their jobs are rewards and recognition. Rewards help build self-esteem, pride of workmanship, and a sense of accomplishment. Rewards and recognition are two of the most important value-added components a company can offer to its employees and it is widely known that reward and recognition are very strong motivators for people.

Employee recommendations

The respondents were asked to comment on TQM programmes conducted in the company and recommendations for improvement. Out of 72 respondents, only 32 responded. Twelve respondents expressed the

opinion that more training and development of TQM programmes should be conducted and seven respondents wanted it to be more attractive and fun. Other recommendations include:

- Staff should be rewarded for their jobs well done
- All staff should support to make sure that all TQM programmes are implemented successfully
- Continuous improvement for employees
- The need for up-to-date information

6. Conclusions

TQM is basically a long-term process. It can take an organization years to put the fundamental principles, procedures and systems in place as well as create an organizational culture that is conducive to continuous improvement. Over 90% of the staff of AHM are aware of TQM and its basic principles and they know that their top management is committed to implement TQM at their organization. However, a sizeable percentage of respondents (37.5%) view that the TQM programmes in the company have not been successful and they have provided the reasons for that. The management of the company must look into those factors that are lacking in the system of the organization. By and large, the employees are upbeat about the implementation of TQM programmes at AHM and they will continuously support the programmes.

References

- Asli, M., 1999. *Enhancing standards: the ISO 9000 way*. Kuala Lumpur: Pelanduk Publications.
- Dadzie, P.S., 2004. Quality management initiatives in Balme library: possibilities, challenges, and constraints for top management commitment. *Library Management*, 15(1/2), 56-61.
- Dahlguard, J.J., Kristensen, K., and Kanji, K. G., 1998. *Fundamentals of total quality management*. London: Chapman & Hall.
- Evans, J.R. & Lindsay, W.M., 2005. *The management and control of quality* (6th ed.). Cincinnati: South-Western College Publishing.
- Gilbert, J., 1992. *How to eat an elephant a slice by slice: guide to total quality management*. Merseyside: Tudor Business Publishing.
- Judith A.S., 2004. *Total quality management: an overview*. <http://www.work911.com/cgi-bin/links/jump.cgi?ID=1916>.
- Kelly, J.M., 1994. *Total quality management: how to program for the high-performance business*. New Jersey, USA: Alexander Hamilton Institute, Inc.
- Lai, K.H., Lau, G. and Cheng, T.C.E., 2004. Quality management in the logistics industry: an examination and a ten-step approach for quality implementation. *Total Quality Management and Business Excellence*, 15(2), 147-159.

Organizational Approach to Total Quality Management: A Case Study

- MAMPU (2004). *Guide on total quality management in the public service*. <http://www.mampu.gov.my/mampu/bi/program/Circulars/DAC0192/DAC0192.htm>.
- Manjunath, U., Metri, B.A., and Ramachandran, S., 2007. Quality management in a health care organization: a case of South Indian hospital. *The TQM Magazine*, 19(2), 129-139.
- Miguel, P.A.C., 2006. Quality management through a national quality framework: the experience of a hospital in Brazil. *The TQM Magazine*, 18(6), 626-637.
- Miller, L.M., 1995. *Customer focus: key to total quality*. Kuala Lumpur: Golden Books Centre Sdn. Bhd.
- Motwani, J., Klein, D., and Navitskas, S., 1999. Striving towards toward continuous quality improvement: a case study of St. Mary's hospital. *Health Care Manager*, 18(2), 33-40.
- Prajogo, D.I. and Sohal, A.S., 2004. The sustainability and evolution of quality improvement programs – an Australian case study. *Total Quality Management and Business Excellence*, 15(2), 205-220.
- Rahman, M.N. and Tannock, J.D.T., 2005. TQM best practices: experiences of Malaysian SMEs. *Total Quality Management and Business Excellence*, 16(4), 491-503.
- Ross, J.E., 1995. *Total quality management: text cases and readings*. New York: Amacom.
- Sing, S. and Desmukh, S.G., 1999. Quality initiatives in the service sector: a case. *Total Quality Management and Business Excellence*, 10(1), 5-16.
- Venkateswarlu, P. and Nilakant, V., 2005. Adoption and persistence of TQM programs – case studies of five New Zealand organizations. *Total Quality Management and Business Excellence*, 16(7), 807-825.

