A STUDY ON THE APPLICATION OF TOTAL QUALITY MANAGEMENT (TQM) PRINCIPLES AMONG MANAGERS IN A GOVERNMENT DEPARTMENT IN KUCHING

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A thesis submitted for the partial fulfillment of the requirement for the Degree of Master of Science

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2003
DECLARATION

I declare that this thesis entitled “A Study on the Application of Total Quality Management (TQM) Principles among Managers in a Government Department in Kuching” is my own work except for the literature reviews, of which I have cited the sources.

Basil Wee Geok Sang
March, 2003
DEDICATION

To all the many Great Men and Women, who contribute in their own ways to make this world a better place for everyone,

and

To Ann, Bryan and Maurice.
I would like to express my gratitude and appreciation to:

Madam Masiniaih bt. Marzuki, my supervisor, for her invaluable advice, suggestions and keeping track on my progress of writing this thesis. Her comments and guidance were a great help in accomplishing this study.

All the divisional heads and their assistants for their cooperation and participation in this study.

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Ann, Bryan and Maurice for balancing my life and an opportunity to share our love.

Basil Wee Geok Sang
31 March 2003
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ABSTRACT

The significance of this thesis was that such a study on the Application Level of TQM Principles had not been carried out among the managers in DBKU. As the managers were an important group to determine the performance level of the organization, it was necessary to examine their status in the application of TQM Principles. This study had been very meaningful as it was able to determine academically through a systematic research methodology to find out their skills and knowledge in TQM Principles. As TQM is a proven management tool to enhance organizational excellence, this finding was important for the organization to utilize the findings to improve the situation. Though the elements of TQM Principles are not confined only to the three, namely, Teamwork, Customer Focus and Innovation/continuous Improvement, this study had revealed the status of the application level of the managers. It was revealed in this study that 37.5% of the managers have a ‘High’ level of application while 62.5% were in the ‘Very high level’. This was a very positive result though the organization had been in existence for 15 years. Another fact to substantiate this positive finding was the various awards on quality received by the organization. The other positive finding in this study was that there were no significant differences among the elements of TQM Principles except between customer focus application level and the managers of the different age groups. It indicated that age groups did have an influence in customer focus. The problem encountered in this study was minimal though it would be more comprehensive if other elements of TQM Principles could be included. Recommendations were also made in this study to improve the level of application on the managers by the management. The recommendations were done based on the finding and it took into consideration the important role played by the managers in the organization.
ABSTRAK

CHAPTER ONE
INTRODUCTION

1.0 Background of Study

The quest for cost reduction, productivity and quality improvement after the second world war by the Japanese has led in the reform of how organization go about their business. It has become the Japanese culture to focus on Total Quality Management (TQM) especially in their car manufacturing industry and their competitiveness has caught the attention of the Westerners. TQM has been in existence for a long time and basically it is a management approach to a long-term success through customer satisfaction. The other peculiarity of TQM is that it involves the entire members of the organization. The three well known TQM gurus are Edward Deming who is famous for the ‘Plan, Do, Check & Act cycle, Joseph Juran for ‘Strategic quality planning and Armand Feigenbaum for introducing total quality control in companies. Everybody knows that for an organization to sustain its strategic position, there is a certain amount of Quality Management adopted to run the business. Swift, Ross and Omachonu (1998) defined Total Quality Management (TQM) as the integration of all functions and processes within an organization in order to achieve continuous improvement of the quality of goods and services. The ultimate goal of any business is to satisfy the customers besides profit making. Customers could be from internal (those within the organization) or external. TQM is all about continuous improvement in an organization in order to satisfy the needs of the customers. Organization here includes the various business units or divisions. As such it is important to identify who our customers are in order to establish their loyalty to the organization or to attain that competitive edge.

This study though not a new subject to be discussed, was relevant to the organization concerned as it determined their assets and competitive edge. Before explaining why the study was held in Dewan Bandaraya Kuching Utara (DBKU), it would be good to note that DBKU is a local authority formed on 1st August 1988 to administer the area of Kuching North. It has about 1050 officers to carry out the various services to the residents. Their TQM journey begun in 1994 and until today they had won numerous Quality awards both in the State and National level. The most outstanding one was the Prime Minister Award in Quality, which is the highest award in the country. It was won in the year 2000. In 1998 DBKU was certified under the MS ISO 9001 by Malaysian Administrative & Management Planning Unit of the Prime Minister's Department (MAMPU). In the national level it was the second Local Authority after Kuantan Municipal Council to be certified under the MS ISO series. With such a sound track record it should perform well in delivering Quality services to the customers but this is not the case. There are still complaints from the public on the various services provided by the organization. This study is part of the requirement of the author to complete his studies in MSc (HRD) and would endeavour to study in depth why inefficiency still prevail in the organization despite its sound record in TQM. The study
explores the application of TQM principles from the managers in the area of Teamwork, Customer focus and Innovation/continuous improvements. As it was commonly understood that TQM would put an organization into the forefront of other organizations, this study would find out how successful had DBKU been in inculcating TQM Principles amongst the managers. This study would identify the situation in DBKU, and how to enhance the application of TQM Principles. In order to be more focus in this study, it would only cover the basic principles of TQM. Dean and Bowen (1994) link TQM to three basic principles, Customer focus, Continuous improvement (innovation) and Teamwork.

1.1 Problem Statement

Without the focus on TQM principles, the effort to achieve organizational excellence remains a dream. Hence it was important to find out the application level of the TQM principles among the managers. Has the investment in implementing the TQM been effective in the organization over the years? What would be the relationship between the age group of the managers and TQM principles? Was there any relationship between the manager's years of service and TQM principles?

1.2 Research Questions

This study attempt to answer the following research questions:

1.2.1 TQM application level

- What is the teamwork application level of the managers in DBKU?
- What is the customer focus application level of the managers in DBKU?
- What is the innovation/continuous improvements application level of the managers in DBKU?

1.2.2 Significant relationship

- Is there any significant relationship between the manager's age group and the application of TQM principles?
- Is there any significant relationship between the manager's years of service and the application of TQM principles?

1.2.3 Significant difference

- Is there any significant difference in teamwork application level and the managers of the different age groups?
- Is there any significant difference in teamwork application level and the managers with different years of service?
- Is there any significant difference in customer focus application level and the managers of the different age groups?
- Is there any significant difference in customer focus application level and the managers with different years of service?
- Is there any significant difference in innovation/continuous improvement application level and the managers of the different age groups?
- Is there any significant difference in innovation/continuous improvements application level and the managers with different years of service?

1.3 General objective of the study

The objective of this study is to suggest ways to rectify the problem faced by the managers in the overall application of TQM principles in DBKU. It is also to find out the extent of application of this management tool of the managers in the organization on TQM principles. Finally, this study aims to find out how successful has DBKU been in assimilating the three TQM principles to the Managers.

1.3.1 Specific objectives of the Study

As the scope of TQM is broad, this study intend:

a. To find out the relationship between the age group and application of TQM principles.

b. To find out the relationship between the years of service and application of TQM principles.

c. To find out whether there is any significant differences in the demographic factors and the application of TQM principles.

d. To determine the level of application of TQM principles on Teamwork, Customer focus and Innovation/continuous improvement among the different age group and years of service of the managers.

e. To suggest some recommendation to improve the application of the three elements of TQM principles among the managers.

1.4 Conceptual Framework

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1.5 Research Hypotheses

a. Ho1 – There is no significant relationship between the manager’s age group and application of TQM principles.
b. Ho2 – There is no significant relationship between the manager’s years of service and application of TQM principles.
c. Ho3 – There is no significant difference between teamwork application level and the managers of the different age groups.
d. Ho4 – There is no significant difference between teamwork application level and the managers with different years of service.
e. Ho5 – There is no significant difference between customer focus application level and the managers of the different age groups.
f. Ho6 – There is no significant difference between customer focus application level and the managers with different years of service.
g. Ho7 – There is no significant difference between the innovation/continuous improvement application level and the managers of the different age groups.
h. Ho8 – There is no significant difference between innovation/continuous improvement application level and the managers with different years of service.

1.6 Significance of the Study

The Managers of DBKU are like the ‘Generals of an army’ because they command the various activities of the organization including all the resources utilized by them. As DBKU is a big organization, how well it functions as a Local Authority will depend on the knowledge and skill of their managers. The competitive edge of an organization is determined by various factors. One of the major influencing factors is the TQM principle. Since the embarkation into Total Quality Management in DBKU, it had developed a certain Quality culture or characteristics among the managers. So far there has been no study or research being carried out to look specifically on how far they have achieved their TQM principles. TQM principles in this context would focus both the internal and external customers. Are they serious about innovation and teamwork? From the information gathered, we would be able to determine the problem faced by the managers in inculcating the TQM principles in their respective division. It would be a valuable source of information and guide for the management to incorporate into their annual strategic planning like recommending some specific training for the managers.

This study is very timely, as the organization has just undergone some transformation because of the wishes of the State Government. It has resulted in some restructuring of the organization. There was also a shift of executive power for the whole organization from the Mayor to the Chief Administrative Officer. The Board members are now known as Commission Members. The findings of this study would be of great help to position where DBKU is now. It would also be used to evaluate how ready they are for the new direction.
Financially, this study would not involve much direct cost to the organization (DBKU) as well as the researcher because there would be not much expense on logistic. As such the significant advantage of this study is that it was a feasible project both financially and logistically.

1.7 Limitations of the Study

The key findings of this study are based on the primary data collected through the questionnaires distributed to the managers. How truly the respondent answer to the question is based on their sincerity and the finding is depended on it. The other limitation is the perception of the respondents to the question. As each of the managers come from different academic backgrounds, the way they answer the question would be different. This study was confined to the managerial group of officers in DBKU as such it was not a conclusive study of the whole organization in term of the application of TQM principles.

1.8 Definitions

1.8.1 Application of TQM Principles operationally will be how the managers link it to their planning and daily operation.

1.8.2 TQM Principles conceptually according to Sadgrove (1997) had identified 5 principles, which are:
- Concentrate on the customer
- Do it right
- Communicate and educate
- Measure and record
- Do it together

In this study we will only focus on Customer focus, Continuous improvement or innovation and Teamwork.

1.8.3 Managers are the Head of Division and their assistant in the respective division.

1.8.4 Customer focus according to Swift et al (1998) comprises of listening to the voice of the customer, predicting customer behavior and determining customer quality expectations. Operationally in this study we will focus on the supplier partnership, service relationship with internal and external customers, concern on quality, complying with existing standards and awareness level of the services provided.

1.8.5 Innovation/Continuous improvement according to Oakland (1997) comprises of both invention and design of new products and services, embodying novel ideas, discoveries and advanced technologies, and the continuous development and improvement of existing products, services and processes to enhance their performance and quality. Operationally this study will focus on awareness of the importance of innovation. It would also include their frequency of contribution to improvement and innovation.
1.8.6 **Teamwork** according to Ruin (2001) are effort put by a group of people who are committed to a common purpose, performance goals and approach, for which they hold themselves mutually accountable. Operationally this study we will focus on the level of cross functionality and auditing, taking part in joint project, participation in Quality suggestion, awareness on the importance of team-building and making group decision.

1.8.7 **Internal Customers** in this study will be confined to the employees of the various levels within the organization.

1.8.8 **External Customers** means any person or organization outside DBKU like the State Government, ratepayers, voluntary organization, suppliers of goods and services and politicians.
CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction

This Chapter reviews the literature related to the study on what other authors and researchers had found out on the TQM principles in the various organizations. This study only concentrates on Teamwork, Customer focus, Innovation/continuous improvement, which are the basic component of TQM principles. This Chapter explores the importance of TQM in an organization and the problem of sustaining it. The element of change was a significant element to the successful implementation of TQM in an organization and this chapter explores the findings from various researchers.

2.1 What is TQM?

There are many definitions for TQM by different authors according to their respective field of expertise but the clear and simple definition is by Brown (1993) who put it simply as a management philosophy, which seeks continuous improvement in the quality of all the processes, products, and services of an organization. It also covers the aspects of customer satisfaction (both internal and external), continuous process and product improvement, employee involvement (usually through teamwork) and management by data and facts. The above interpretation of TQM would be further explained in detail later in this chapter.

2.2 TQM Principles

This is the basic, which must be understood before an organization begins its journey of TQM. Tan Sri Dato Seri Ahmad Sarji bin Abdul Hamid (1995) who was the Chief Secretary, to the Malaysian Government wrote in his book The Civil Service of Malaysia, highlighted seven TQM principles for the civil service to implement TQM. They are:

- Top management support;
- Quality strategic plan;
- Customer focus;
- Training and recognition;
- Enhancing teamwork;
- Performance measurement; and
- Quality assurance.

Though the services provided by DBKU are monopolistic in nature, which means that they do not have direct competitors, they must continue to incorporate the elements of TQM principles in their management in order to sustain their competitive edge. In the study of McAdam et al (2002) entitled “Sustaining quality in the UK public sector: Quality measurement frameworks” they revealed the
increasingly importance of TQM principles in the public sector due to demands for increased levels of stakeholder satisfaction and government cost reduction and performance programmes. Though their questionnaire response rate was 62 per cent, involving 163 public sector organizations, they found out that quality frameworks play a key role in improving organizational performance over time. Likewise, in DBKU too, the expectation of stakeholder like their residents, government and people representatives always demand a better performance.

Though in this study, it uses the management tool of TQM, it cannot be denied that there are other elements, which contributed to the overall well being of the organization. This was supported by Shadur (1995), who warned that though TQM is a key method for improving organizational performance, it acknowledges that there are many other variables which influence performance, including environmental factors, financial strength of the organization, marketing strategy, organizational design and organizational climate. TQM need to be integrated into strategic business planning in order to capitalize its usefulness and practicality. In other words, there must be an emphasis on TQM by the managers when they plan the various businesses to the customers in DBKU.

Another finding on the importance of TQM principles was confirmed by Bennington and Cummame (1997) in their study on TQM and Business planning in the public sector as compare to commercial entities. Their concluding comments identified the following success factors of their case study in the organization, which includes:

- Customer focus vision and leadership shown by the CEO and possibly organizational background which made him different from many public sector CEOs;
- Customer focus leadership, determination to succeed and willingness to take risks on the part of the general manager;
- Concerted effort made to link every staff member to the customer through the use of various techniques
- Integration of TQM and business planning approaches.

### 2.3 The Need for TQM

Nowadays there are so many management tools or philosophy for a manager to adopt, however Oakland (1997) found out that TQM is necessary for improving the competitiveness, effectiveness and flexibility of an organization. As it is a way of planning, organizing and understanding each activity, it depends on each individual at each level. There could be many short-term approaches, DBKU could adopt, however, it decided on the journey of TQM way back in 1994 due to various reasons. One of it could be the sustainability of the approach as shown in the study in UK where over 394 organizations revealed that quality management efforts has been very widespread with half of the respondents from both the private and public sectors reported to have formal TQM programme. While most managers from both sectors expected quality management to be a long-term commitment and 80% expected it to last indefinitely. The above findings were
conducted by Redman et al. (1995), when they revealed why there was a need for TQM. Following were the reasons:

- Legislation giving more choice to the customers;
- Compulsory competitive tendering;
- Increasing pressures on cost restraint;
- The demands of value for money reforms;
- More demanding customer requirements; and
- Not least the Citizen’s Charter programme.

The need of government employees applying TQM in their work place was supported by Walsh (1994), who stressed that quality management is viewed by many from the public sector as the answer to solve criticisms of public services. Examples would be inefficiency, wastefulness and being unfriendly to customers. In other words, TQM can be used to minimize the shortcoming of the existing work process in the public sectors. In the case of this study, if the level of application of TQM principles is shown to be unsatisfactory then the management must reevaluate at their work process to overcome the shortcoming. Thus the need of TQM is always needed to improve the weaknesses of the organization. TQM was adopted as one of the management tool in DBKU before their journey towards ISO 9000.

To further justify the need for TQM, Umesh and Hoque (2002) in their case study on the Housing Authority in Fiji about appraising TQM practices found out that TQM is needed to promote both “institutional” and “quality” cultures. Their finding recognizes that TQM to be an important management principles to bring about a positive culture in an organization. This finding clearly supports the finding of Walsh on the need of TQM for improvement and the setting up of the Corporate Planning division to manage TQM activities in DBKU.

2.4 Element of change before TQM

Like the implementation of new ideas or plans, there must be a readiness among the target group to change before it can even be implemented. How receptive the managers are, depend on their readiness to adapt themselves to the changes created by the management or external forces. Before they can be receptive, the management must be prepared for it too. Hongyi Sun et al. (2000) in their studies on employee involvement in 180 manufacturing companies reviewed that new management philosophy and new attitudes towards employees before the implementation of TQM, found out that TQM is not a management own work process but the entire organization including the employees. Their study recognized the need to:

- Delegate
- Communicate
- Training
- Incentive.
This could be explained clearly by examining their framework or model development from their studies.

**Figure 1 Managerial framework for employee involvement.**
**Source: Hongyi Sun et al. (2000)**

They revealed that for a new management philosophy to be effective, it is necessary to delegate with authority, communication of information, training of new skills and implement incentive scheme for reward to the employee. Thus, the application of TQM principles requires the management and managers to be ready for changes.

In another case involving the readiness for change, Olian and Rynes (1991) used four survey sources from KPMG of 62 companies, two Conference Board surveys of 149 firms and 158 Fortune 1000 companies, and the Ernst & Young study of 500 international organizations; found out that there must be a reform in the organization culture before any achievement of TQM. Change includes visioning the leadership whereby it normally starts from the leaders. In the context of this study, the managers must be the receptive to change to be effective in the application of TQM principles.

To substantiate this, the finding by Ferris (1992) found out that building a vision in an organization is a better approach than the Management By Objective approach. The finding revealed that through the change by visioning could bring in excellent results like creative ideas, proactivity, frequent reviews for adjustment, and improvement in organizational communication. Thus, these two cases showed that change is a prerequisite for any implementation of plans. In this study, it was the management of DBKU and the managers who need to be receptive to changes in order to be successful.

Though there are various approaches for an organization to prepare for changes, there is no one standard approach that can be adopted by everyone. Jones and Ryan (2002) in their study based on organizational theory and using a contingency
model of quality management practices, revealed that no one set of quality management practices can be implemented and be expected to increase performance in all environments. This means to say that different organization should adopt different quality management practices, as their environmental situation is different. For any change to take place there would be no fixed procedures for DBKU to follow, which they could adopt it entirely from other organization but they would have to go through the process to experience it all to know the effectiveness.

The need for change may not be decided by the organization and this is substantiated by Aw (1998) who found out that change is a "desirable" element and not one that is "needed". He stressed that the company under his study must response to the forces of change driven from the external environment in order to be competitive. He noted that change is always present internally and externally. Likewise in this study, the management and the managers must recognize the same fact as those found out by this author.

Change in this study is not confined to the managers only but even to the work procedure of the organization as Santos & Escanciano (2002), who in their study on companies certified under the ISO 9000:1994 system operating in Spain affirmed that the benefits attained by such companies are basically linked to an improvement in their internal efficiency. With the ISO system, organization who are certified need to have documented work procedures, which will need to be constantly review. Such procedures will also be constantly audited internally or by an external auditor. This shows that for TQM to be implemented in an organization, change is necessary to make the work procedure more systematic. This would result in delivering a service or product, which, conforms to the stated standard quality. This could be the same scenario as in DBKU where they too were certified under ISO 9000.

Incidentally, Wiele et al. (2001) in their study on using ISO 9000 as a tool for organizational change identified four important factors that can contribute to the success of TQM. They are:

- The commitment of CEO and senior executives will inspire the employees.
- Ability of the management team to acquire knowledge and skill in linking TQM to their business strategy.
- The system infrastructure of the organization must integrate with the TQM activities.
- Human resource management, which include continuous training and development of staff. Closer relationship between employees and managers in particular their multi-function roles.
Their study also revealed that 77% of the respondents were forced to attain ISO 9000 and 23% were not. Below in Table 1 shows their findings:

**Table 1: External pressure to attain ISO 9000 series certification**

<table>
<thead>
<tr>
<th>Type</th>
<th>Minimalists (forced to ISO, no TQM)</th>
<th>No. forced to attain ISO</th>
<th>No. not forced to attain ISO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 1</td>
<td>79</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Converts (forced to ISO, later on move to TQM)</th>
<th>No. forced to attain ISO</th>
<th>No. not forced to attain ISO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 2</td>
<td>14</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Committed (voluntary ISO, later move to TQM)</th>
<th>No. forced to attain ISO</th>
<th>No. not forced to attain ISO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 3</td>
<td>-</td>
<td></td>
<td>13</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Simultaneous ISO &amp; TQM</th>
<th>No. forced to attain ISO</th>
<th>No. not forced to attain ISO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 4</td>
<td>10</td>
<td></td>
<td>11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>TQM first, then ISO</th>
<th>No. forced to attain ISO</th>
<th>No. not forced to attain ISO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 5</td>
<td>11</td>
<td></td>
<td>11</td>
</tr>
</tbody>
</table>

| Total  | 114 (77%)                                        | 35 (23%)                |

Source: Brown and Wiele (1996)

Based on the above table, DBKU falls under the Type 5 as they implemented their TQM program ahead of their certification in ISO 9000.

The need for change is supported by the study of Procter and Currie (2000) where they found out that in order for teamwork to be successful, the organization structure and operation approach must undergo some fundamental changes. Their study was based on the Inland Revenue of the UK’s tax assessment and collection department, which had initiated groups, removing the barrier of management and staff and having an effective performance management. Likewise in DBKU, the management must identify and remove any barriers, which might hinder any effort in the application for TQM principles.

Being a public organization most of their work procedure is governed by regulation, it could result in bureaucratic approached in delivering its services. This could be substantiated by the finding of Morgan and Murgatroyd (1994) who wrote on the general belief that public sector managers are more resistant to change due to an over-commitment to regulation and precedent. Also the need for change is not as obvious compared to the commercial sectors. The nature of operation in the commercial sectors is definitely more demanding as they are managing the survival of their organization. It is either they change or they lose out to their competitors. This finding could be proven wrong if the applications of TQM principles are clearly explain to the managers.
The managers must note that change is inevitable and Noriah Ahmad (1998) in her study on Exploring the effectiveness of core development programs through Action Research identified the 4 basic changing environment and they are:

- Economic turbulence
- Political
- Social and
- Technological

DBKU was no exception as they were affected by the above four changing environment too. Being a local authority, they are accountable to the politicians who represent the residents.

2.5 Teamwork

The composition of team could be described following the model from the group theorist Belbin as featured in the book by Manchester Open Learning that the team consists of the following layout.

Figure 2: Characteristic of Team
Source: Manchester Open Learning

According to Belbin, the multi roles are complementary and balancing in nature for the existence of teamwork to function. Likewise the component of teamwork in this study should comprise of the various element as shown in Figure 2. Brief explanations of the various terms used are:

- Chairperson = a disciplined thinker who would organize and co-ordinate the team keeping it ‘on course.’
- Shaper = outgoing and creative character who drives the group.
- Plant = withdrawn and thoughtful person, providing ideas, contemplating problem and not keen to be in the limelight.
- Monitor evaluator = a person who carefully evaluates ideas and arguments to check their validity, spots problems in creative approaches.