

# The Development of Quality Management Model for Implementation in Thai Organisations

P. Kluaypa and S. O. Onuh

**Abstract**—Quality improvement of companies is necessary to be performed continuously to realise the competitive advantage under the global marketplace. Gurus such as Deming, Juran and Feigenbaum introduce the philosophy of Total Quality Management (TQM) to implement the quality management programme to accomplish the best practice for organisation. However, in practice, the Malcolm Baldrige National Quality Award (MBNQA) and European Foundation for Quality Management (EFQM) models based on the TQM principle are the actual quality management models that are applied widely in the US and European companies. In this research, a new quality management tool as been proposed in order to implement the quality management programme in Thai organisations. This new quality management tool based on the MBNQA and EFQM models. The new quality management model will be applied to Thai organisations to examine the implementation of TQM in Thailand. Hence the results of the research will show the successes and failures of the TQM implementation.

**Index Terms**—EFQM, MBNQA, Quality Constructs, Thailand, Total Quality Management.

## I. INTRODUCTION

As a result of high competitions between organisations, public and private sectors are under severe pressure to improve their performance in order to overcome the global demand of their products and services. Two main factors that are influencing the sustainability of organisation are competitors and customers. Customers prefer to spend their costs valuable and get the most benefit. The top management wants the company's operations to be effective and efficient as much as they can. This will eventually lead to the company's ability to compete on a global scale.

Consequently, organisations require suitable management tools to take the advantage of competitiveness and develop the performance to be effective and efficient. Then the concept of total quality management (TQM) is initiated by the managerial experts to encourage such idea. In recent years, practitioners and academics have developed tools to aid managers to manage their organisations. The prominent quality gurus are Deming [3], Juran [3], Crosby [3], and Feigenbaum [2]. Their quality philosophies facilitate the

development of tools for the quality improvement programme.

However, the results of TQM implementation by organisations are diverse. The findings from some past studies indicate that some companies failed in their implementation because they included only satisfaction in a few areas of TQM implementation. For instance, it was pointed out that the quality improvement program was hindered to develop further after three years [8]. The practitioners need to study the overall of total quality management, the weaknesses, strengths, and the dilemmas of implementation in the different countries. For example, Asif *et al.* [1] studied how the quality program is effective and the reasons why the quality development program fails.

This research will propose a more efficient new tool that is related to both models because of two reasons. Firstly, the EFQM model is popularly used in the European countries and the researcher is also studying in the UK. Secondly, the MBNQA model is now applied to develop the Thai Quality Award (TQA) that has been utilised in Thailand. The hypothesis is that if the tool is developed from the combination of EFQM and MBNQA models and applied in the Thai organisations, it is hoped that this will lead to a more user friendly implementation of TQM in Thailand.

## II. QUALITY MANAGEMENT

Fig.1 shows the combination of two business excellence models introduced in study [5]. Reference [5] selected qualitative method to do the research instead of quantitative method. Qualitative method helps to evaluate the process of interactive operation of two models (European Foundation for Quality Management (EFQM) and Balance Score Card (BSC)). In addition, the research applies the analysis method and comparative method to assess two models. The similarities and differences can be revealed. The research deploys the method of classification and synthesis to shape a new model that is combined by two models (EFQM and BSC).

Reference [4] examined the critical factors of managerial leadership of Total Quality Management in the UK education using questionnaire, interview, and hypothesis as tools in his research. Their results indicate that the use of different types of questionnaire is good for quality improvement.

Similarly, reference [6] based on earlier studies investigated between quality management and businesses results. This research involves examining the empirical studies and comparing the manufacturing and service sectors.

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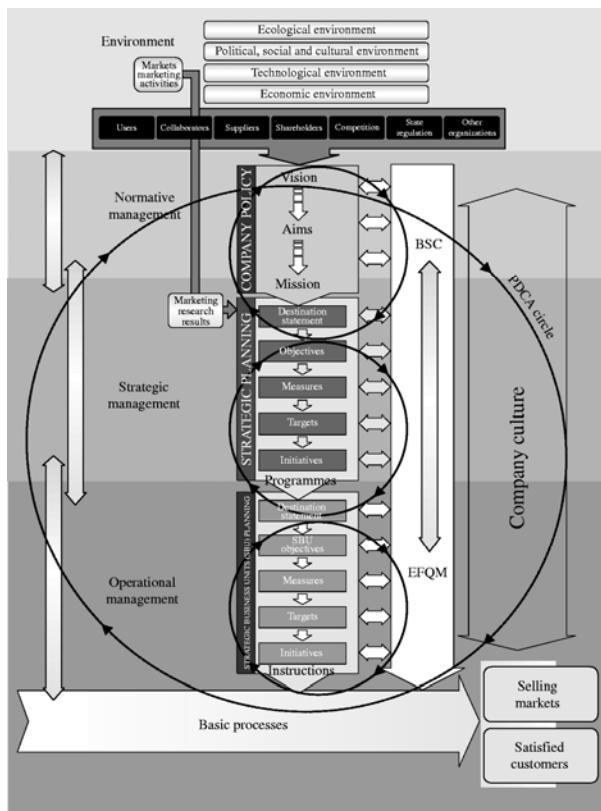


Fig. 1 Integrated Management Model [5]

This study is the meta-analytic research to help the critical review and assessment of the previous researches. The total 14 published papers are selected to study in the perspective of the connection between quality management and business results, and compare between the manufacturing and service companies.

Reference [7] concluded from the study of 120 literatures that 8 critical factors are very significant. These factors are the role of management leadership and quality policy, role of the quality department, training, product and service design, supplier quality management, process management, quality data and reporting, and employee relations.

Reference [9] used psychometric method to create and validate the instrument of quality management. By reviewing the past studies, the steps of this research are the literature review, the construction identification, the items, the scale selection, the pretest, the pilot of test, the data collection, and the statistical test. He concluded the comparison of quality management (QM) measurement instruments and the overview of procedure of validation of measurement instrument.

### III. AIM

Since there is limited published literature regarding the implementation of quality improvement in Thailand, the research expects to develop relevant information to educate Thai organisations. Questionnaire support will also be used to assist in the management of the data that would be

analysed statistically using the Statistical Package for the Social Sciences (SPSS) package.

It is a fact that there are some Thai companies adopting the TQM philosophy in their processes. Additionally, many companies in other countries face various problems when implementing the TQM concepts. Definitely, in Thailand, the challenges of quality implementation are not completely the same as others countries. However, common barriers of quality improvement may not be different, but the key factors that are for merely Thais needed to be identified and considered.

The reasons for choosing these tools (MBNQA and EFQM) are because both models are accepted and recognised as implementation tools in many countries including in the USA, Europe countries, and Asia. Hence using these tools in this research guaranteed the reliability of study. Another reason is that there is no indication that the MBNQA and EFQM quality models have been applied in Thailand. The findings of this research may uncover the development of growth of TQM that is being adopted in the Thai organisations.

### IV. OBJECTIVES

The research is expected to reveal many aspects of TQM implementation in Thailand. The objectives of research based on the Thai companies are

- To examine the implementation of TQM in some countries by robust literature review.
- To develop a new quality management tool, based on the Malcolm Baldrige National Quality Award (MBNQA) model and the European Foundation for Quality Management (EFQM) model, for the implementation of TQM in both manufacturing and service organisations in Thailand.
- To conduct the appropriate methods to implementing TQM for the Thai culture by questionnaire and structure interview.

### V. METHODOLOGY

In this paper, the researcher adapts the ideas illustrated in literature review. The methodologies applied to achieve the quality construction are as follows: research design, questionnaire design, data collection, analysis, and validity and reliability.

### VI. RESEARCH DESIGN

This stage is to design the research methodology to achieve the research questions. The first step of constructing an instrument of quality management is literature review. The review of literature explores the relevance and the scope of study. In addition, an instrument that will be created contains the main parts such as areas emphasised, etc. Then the implementation of instrument using this research is shown in Table 1. The final instrument constructs which are based on MBNQA and EFQM excellence models are leadership, strategic planning & policy, partnerships & resource, process management, people results, customer results, society results, and business and key performance results.

### VII. QUESTIONNAIRE DESIGN

Questionnaire is important to complete the research. Questionnaire helps to retrieve the useful information from people to be used in the analysis of the data. Since questionnaire depends on the decision of recipients, the weighting of the answer is significant. In this research, instead of selecting the seven-point scale, we concentrate on the five-point Likert scale to identify the different answers because the number of scale is suitable and this scale helps recipients make a decision in short time.

### VIII. DATA COLLECTION

The recipients are Thai people working in Thai organisations in Thailand. We expect to travel to Thailand by the second year of study. The number of Thai organisations is about 100. Questionnaire will be personally delivered to the organisations by the researcher and collected by the researcher.

### IX. ANALYSIS

After collecting all questionnaires, we will check the completion of questions. The data will be separated into two

**Table 1** The implementation of instrument using this research

<i>Instrument</i>	<i>Quality construct</i>
Areas emphasised	Total Quality Management based on MBNQA and EFQM models
Sample size	100 firms
Respondents	Quality managers, general managers, quality supervisor
Level of analysis	Firm
Scale	5-point Likert scale
Pre-testing of instrument?	Yes
Pilot testing of instrument	Yes
Analysis of pilot testing data	Not applicable
Content validation	Literature survey and expert panel review
Multicollinearity of items analysis	No
Unidimensionality	No
Reliability analysis	Cronbach's alpha
Construct validation	Exploratory factor analysis
Predictive (criterion-related validation)	Correlation between QM constructs and measures of quality performance
Final instrument constructs (number of items)	1. Leadership 2. Strategic Planning & Policy 3. Partnerships & Resource 4. Process Management 5. People Results 6. Customer Results 7. Society Results 8. Business and Key Performance Results

groups; usable and unusable data. The data from the usable questionnaire will be put into SPSS software to analyse the meaning of information.

### X. VALIDITY AND RELIABILITY

This step is necessary to test and prove the quality management model. The validity and reliability of quality construct are tested by using the software SPSS. The assessment of the results of validity and reliability is then carried out. This makes a judgment whether the quality construct is useful for application.

### XI. CONCLUSION

This research will achieve a quality management tool which is a combination of MBNQA and EFQM models. The elements of new quality model are Leadership, Strategic Planning & Policy, Partnerships & Resource, Process Management, People Results, Customer Results, Society Results, and Business and Key Performance Results. The development of quality management tool is accomplished by reviewing the literature, designing the research, collecting and analysing data, and testing the validity and reliability. In this research, a new quality management tool as been proposed in order to implement the quality management programme in Thai organisations. This new quality management tool based on the MBNQA and EFQM models. The findings will then illustrate the success and failure of the TQM programme.

The next research should extent the study of quality management in Thailand because at the present there are a few researches of TQM. One of the interesting aspects of TQM, for example, is the self-assessment of quality management that is able to help the organisation to develop the TQM programme effectively.

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