

## CHAPTER I

### GENERAL INTRODUCTION

This study is about Quality Control Circles<sup>1</sup> (QCCs) in two<sup>2</sup> selected organizations, the Division of Finance and Accounts - Ministry of Education, and the Ministry of Housing and Local<sup>3</sup> Government. This study involves an examination of the various aspects of the QCC system. An attempt will be made to identify the facilitative and non-facilitative factors in these various aspects of the system which can affect the QCC development of both these organizations. This study will highlight the findings of the research and make recommendations where appropriate, to assist in the development of QCCs in these organizations.

To begin with, this chapter will trace the history to the introduction of QCCs in the public sector. This will be followed by an account of the area, objectives and the significance of this study. An analytical model as well as the research methodology of the study will also be covered in this introductory chapter. Finally, an account on the limitations of

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1. Sometimes referred to as Quality Circles, QCs, or Circles.
  2. Hereafter referred to as the DFA, Ministry of Education.
  3. Sometimes referred to as Ministry of Housing.

the study with a summary of the organization of the subsequent chapters will also be included in this chapter.

### 1.1. Introduction

This study begins with an introduction to some of the programmes and policies formulated under the Premiership of Dr. Mahathir Mohamed, as a background to the development of QCCs in the public sector. In the years under his administration, he saw the need to examine the adequacy of the administrative systems to meet the present and future challenges of the nation. Endless programmes and efforts were implemented to build up national norms and Work Ethics characterised by diligence, efficiency and increased productivity. This was complemented by efforts like establishing one-stop service payment agencies, improving counter services and introduction of the desk file system. The public service too was constantly reminded of the need for a clean and trustworthy machinery to run the Government. A clean-up campaign (Bersih, Cekap dan Amanah) against corruption was launched. Then there was the Government's Leadership by Example programme. Attempts were also made at promoting cooperation between the public and private sector, carried out through the Malaysia Incorporated Programme which called for close and mutually supportive co-operation between the two sectors. Privatisation of public utilities in order to lessen the financial burden of the Government was also the order of the day.

Another programme under the Mahathir Administration which would be of relevance to this study is the Look East Policy, which the Prime Minister drew inspirations from the Japanese economic miracle. He was impressed by the achievements of the Japanese economy which ranked in the forefront of the world economy, and felt that the Malaysian economy can be transformed provided the nation's human resources can also be developed. This policy, the brainchild of the country's fourth Premier, was thus formulated in 1981 at a time when the general economic situation had been very poor.

With the Look East Policy, a national philosophy which emphasizes discipline, hard work and increase in productivity was formulated. The policy reemphasises the need for Malaysians to pull themselves up by their own hard work, determination and initiative. Various positive values and good work ethics that could be adopted and adapted particularly from Japan and Korea were considered. In fact, the essence of this policy is to emulate the positive work ethics of the Japanese and the South Koreans. Malaysians have to consciously look to the successful nations in the East such as Japan and Korea for their economic models. Malaysians are required to learn from the experience of these countries, and to follow their progressive industrial practices that have rocketed them to top positions in the world. Thus, the nation was urged to address itself to values such as.

- (i) Diligence and discipline in work;
- (ii) Loyalty to the country and place of work;

- (iii) Priority to groups over and above the individual self;
- (iv) Emphasis on high productivity;
- (v) High quality; and
- iv) Increased efficiency .

With the Look East Policy, came a significant by-product - the QCC, a much publicised Japanese management technique and touted to be 'one of the hottest'. QCC became a tool associated with raising productivity levels in the public sector today. The Government entrusted the Institute of Public Administration (INTAN) with the task of introducing the concept to the public sector. The National Productivity Centre (NPC), on the other hand, had to direct its activities to the private sector. Every Government department was encouraged to set up QCCs. The former Minister in the Prime Minister's Department, Datuk Abdullah Ahmad Badawi once said "Quality Control Circles are necessary to instil positive work ethics and inspire work performance among Government servants".

The latter part of 1982 was the take-off point which marked the introduction of QCC into the public sector. Some

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4. Ruslan b. Khatib, "Quality for Productivity Through Quality Control Circles - Malaysian Experience", Paper presented at IQCC Manila (1984), p1.

5. "Productivity: A Bonus Not a Goal", Malaysian Business October, 1983, p. 56.

6. "Working Smart through QCCs", Business Times, 1983.

firms had already been practising the concept since 1979. INTAN organised a seminar for Chief Executives in the public sector. In March 1983 INTAN launched its first training session for Facilitators. Since then, several courses had been conducted for public sector officials. To date, INTAN has organised three annual national-level QCC conventions for the public sector.

It has been about four years since QCC had been adopted. However, little has been known about the present development of QCCs in the public sector. There has been speculation about its existence, its achievements and development. Some opinions have held that QCCs are a total failure and have died a natural death. It is difficult to gauge to what extent this assumption is true for there is no system in the public sector that is used to effect periodic monitoring and reviewing of QCC implementation and development. INTAN may have conducted some evaluation studies but these are merely confined to gauging the effectiveness of its training programs.

It would be a mistake to assume that QCC has failed or is doomed to failure in the public sector. This is because Rome was not built in a day. QCCs in Japan also did not materialise from thin air. The Japanese managers took a long period to become totally immersed in the philosophy and practice of managing for quality. They took some 25 years to make QCC a success. They also took some five years to take off from the introductory and promotional period. Thus, it would be premature to assume that

QCC has failed in the public sector. However, it cannot be denied that there has been some active and non-active QCCs. The time is therefore ripe for an exploration and evaluation of the development of these QCCs to see which way the Circles are heading for in the public sector and what factors can facilitate or do not facilitate their development in the public sector.

### 1.2: Area of Study

This study would be confined to the public sector QCCs. No attempts would be made here to include the private sector QCCs for this would necessitate a study of its own. Although QCCs had its origins in the private manufacturing sector of Japan, in Malaysia and Singapore in particular, QCCs have been known to be extensively used to improve the public services. From the Singapore experience, it cannot be denied that QCCs can be a valuable tool for increasing productivity and improving the quality of services in the public sector. If installed with proper preparation and guidance, QCCs in the Malaysian public sector too can have the potential of making important contributions to the organizational performance of the public sector agencies. Thus by confining this study to the public sector QCCs, we would be able to identify the facilitative or inhibitive factors within the public sector agencies which can affect QCC development in the public sector.

This study is thus specifically a case study of thirty-five QCCs in the public sector. The Circles are those found in two public sector organizations - thirteen Circles from the DFA, Ministry of Education and another twenty-two Circles from the Ministry of Housing and Local Government. Both these two agencies or organisations were selected for this study because they are known to have featured well-organized QCC programmes among various organizations in the public sector.

This study would therefore focus on the following areas of the QCC system:-

(i) The Development and Implementation Strategies of QCCs in both these organizations. The research questions covered are: What were the implementation strategies of both these organizations? What have been the rate of growth of Circles? What have been the level QCC of participation by employees? What have been the QCC objectives? Are they clearly emphasised and what has been the level of QCC achievements in terms of the number of completed projects?

(ii) The QCC Organizational Structures in both these organizations. The research questions covered are:

What are the characteristics of the Steering Committees in the respective organizations? What have been the role of these Steering Committees? Are the Steering Committees proper and effective for QOC promotion and coordination? Do Steering Committee members have an adequate understanding of the QOC concepts and operations?

(iii) What are the salient characteristics in terms of sex, age and educational background of the facilitators? What is their mode of selection? What is their level of confidence in undertaking the task? What is their span of control over the Circles? Does facilitating the Circles involve part-time or a full-time task? Has the training accorded to them been sufficient to allow them to undertake their respective roles? Are they competent to coordinate the Circles effectively?

(iv) What are the salient characteristics of members and leaders in terms of sex, race, age, and educational levels attained? Has training been accorded and adequately met to enable them to undertake their respective roles? Is there a high level of commitment and active participation from the members? Are the leaders able to perpetuate the Circle activities?



- (v) Is the organizational environment conducive to QCC in terms of management support? What is the attitude of management towards certain practices that can support QCC? What form does the Reward System take? Is it adequate to motivate active participation from the members?

Attempts will be made first to examine the various aspects of the QCC systems to find out the characteristics prevailing in each of these aspects. Following that, attempts will be made to evaluate them to determine the extent they are facilitative or inhibitive to the development of QCCs in their respective organizations.

### 1.3 : Objectives of Study

The objectives of this study are as follows:-

- (i) to provide information on the various aspects of the QCC systems especially in the DFA, Ministry of Education and the Ministry of Housing and Local Government.
- (ii) to determine the facilitative or inhibitive factors to the proper and continued development of QCCs in both these two organizations under study.
- (iii) to suggest solutions for some of the problems identified and discussed in this study.

#### 1.4 : Significance of Study

This study of QCCs in the two selected organizations would be significant from the various points:-

- (i) Although it has been about four years since QCCs have been introduced into the public sector, not much research or periodical review have been undertaken to ascertain and evaluate the performance of those Circles in existence in the public sector. While much foreign texts on QCC techniques, concepts and philosophies are made available, a case study of this kind on QCCs in the Malaysian public sector is rarely found. This study therefore would be significant in filling the literature gap about QCC in the Malaysian public sector today.
- (ii) The study is an evaluation of Circle activities in these two organizations. Through the findings of the study it not only can serve as a source of guide for these agencies to assess the performance of their very own QCCs but also help provide the answer as to what can be done to make their Circles better and more effective. This would help them in the promotion and achievement of their QCC objectives and hence raise the productivity of these two organizations.

- (iii) The study can provide a source of guidance for other public sector organizations running their own QCC programmes to learn by studying the experience of others. The findings are meant to provide insights and learning experience for other agencies. For those about to install a programme or perhaps contemplating the possibility of creating a QCC within their organization, access to real life examples can be specially valuable in providing guidance and stimulus to the QCC programmes.
- (iv) The findings of this study would be significant too from the national point of view. It would be a source of guide especially for policy makers to plan the future direction of QCCs in the public sector so that such QCC systems will move along the correct path towards achieving the desired growth and desired objectives. This will in turn help raise the nation's productivity, a very highly stressed national objective at the present moment.

#### 1.5 : Analytical Model

One of the purposes of this study is to ascertain the types of facilitative or non-facilitative factors which exist in both the two organizations, which can have an effect on the functioning and development of QCC groups in these organizations. To achieve this purpose, it is necessary for this study to first identify those aspects which are likely to have an effect on the

QCC functioning and development in any given organization. In other words, it is necessary to develop an analytical model which helps to identify the important variables which need to be focused on in the study.

In looking through the literature, the researcher found Oleg Greshner's model<sup>7</sup> suitable to a certain extent for her purpose. This model comes in the form of a cause-and-effect diagram identifying variables which have been found to have an influence (positive or negative) on QCC development. The factors identified by Oleg Greshner's model as shown in figure 1.1 are: Administrative dependencies, Company, QCC philosophy, QCC administration and infrastructure.

However, the researcher observed that the model fails to include certain variables which the field of small group research indicates could be important. Basically, small group research is aimed at studying the factors which can affect small group performance especially in the field of problem-solving groups. Since QCC groups are basically small problem-solving groups, the findings of small group research would definitely have a bearing on the study of QCC groups. So the analytical model adopted for this study can be said to be a modification of Oleg Greshner's model to include additional variables suggested by small group research.

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7. Oleg Greshner, "Reasons Why QCC Do Not Attain Expected Results" in Naota Sasaki and D. Hutchins (eds), Problems and Experiences in Asian Region (Oxford: Pergamon Press, 1984) p. 94.

The analytical model for this study in diagrammatic form is as shown in figure 1.2.

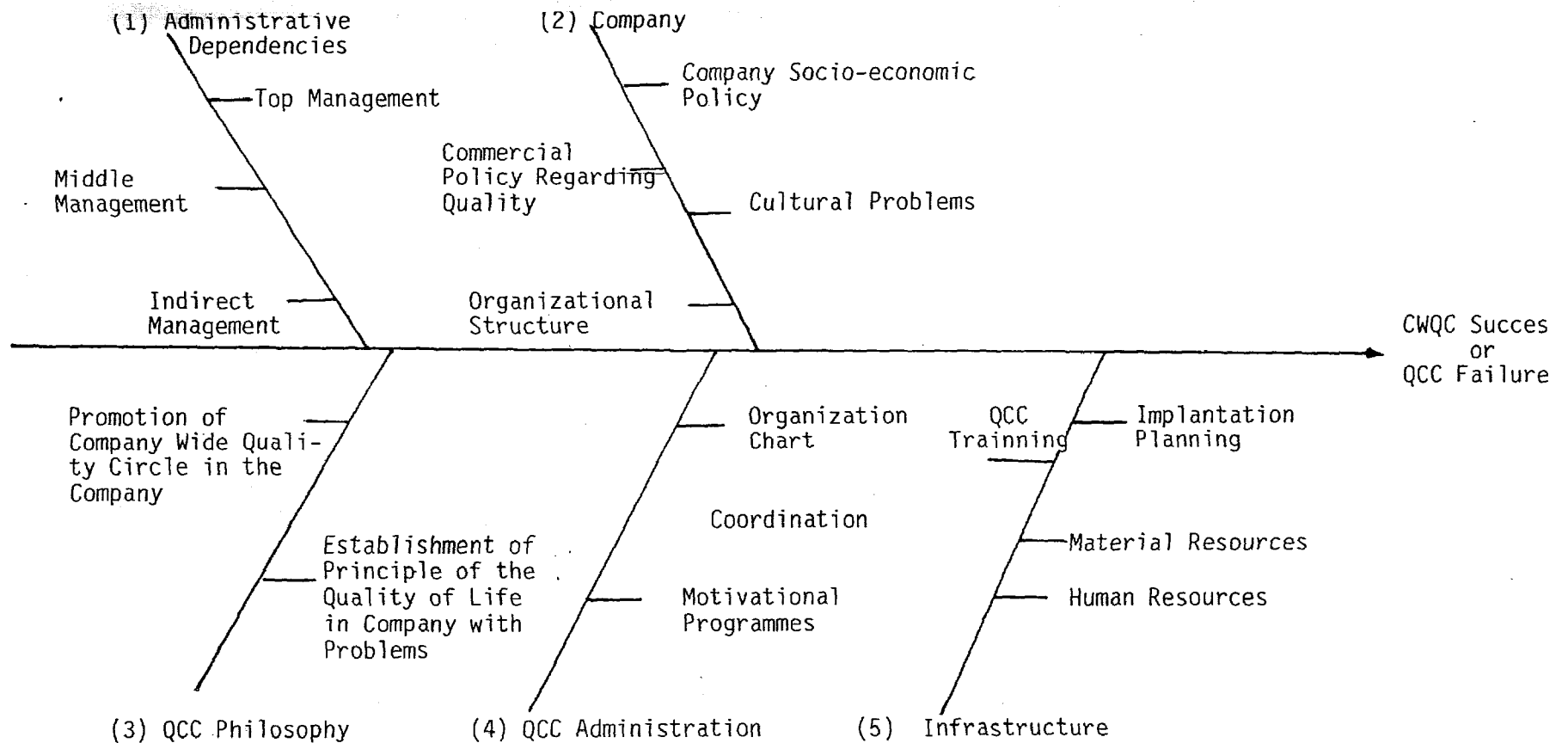
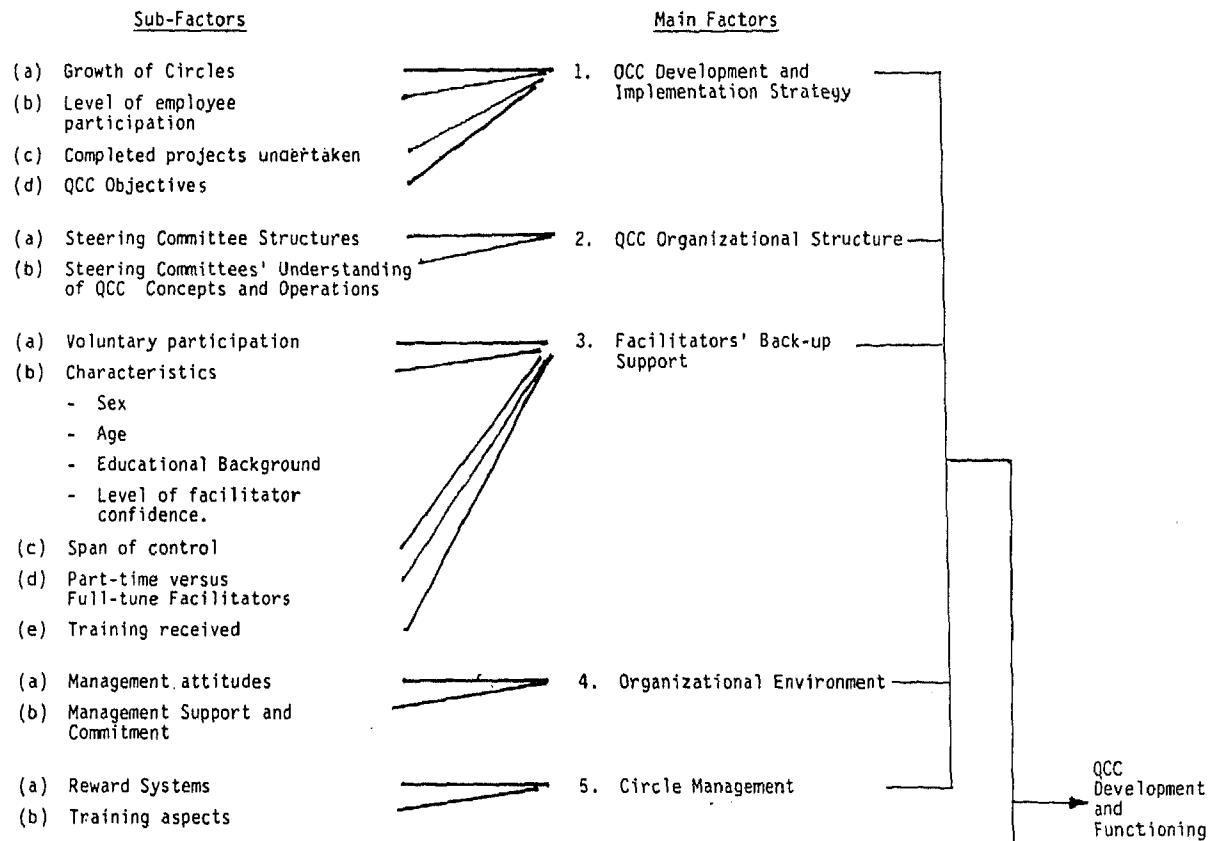


Figure 1.1 : Oleg Greshner's Model: Cause and Effect Diagram Relating to the Success or Failure of QCCs.

Source: N. Sasaki and D. Hutchins, Problems and Experiences in the Asian Region, 1984, p. 94.

## EXTERNAL FACTORS



## INTERNAL FACTORS

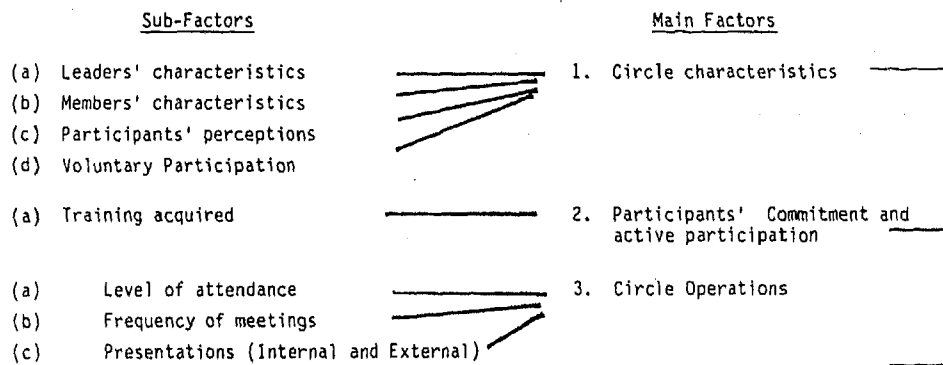


Figure 1.2: Factors Affecting QCC Development and Functioning

The model postulates that the functioning and development of QCC in an organization can be affected by two sets of factors: one consisting of factors external to the QCC groups and the other internal to the groups. The external factors consist of the QCC development and implementation strategy, QCC organizational structure, facilitators' back-up support, the organizational environment, and Circle management. The internal factors consist of the members' and leaders' characteristics, the participants' commitment and Circle operations.

The various factors may be briefly explained as follows:

#### External Factors

##### (i) QCC Development and Implementation Strategy

It is important to examine the QCC development and implementation strategies in organizations which have QCC in order to find out which way the Circles are heading for. At the same time we will be able to indicate whether the implementation strategy adopted is either a fast or gradual approach. A gradual approach in the implementation strategy has its advantages for QCC development.



(ii) QCC Organizational Structure

In organizational theory, for any ongoing activities, there must be established some structure for overseeing the conduct of the activity. Likewise, to plan for, coordinate and administer the QCC groups there must be an organizational structure consisting of the Steering Committee and other components. Without one, the functioning and growth of Circles may not proceed in a smooth manner.

(iii) Facilitators' Back-up Support

The facilitators play a significant role in terms of coordinating the Circles effectively. It is important that the facilitators should be able to undertake the task adequately and sufficiently well. They provide the kind of back-up support which is essential to the continued development of the Circles. The facilitators' task therefore is to help where necessary and to undertake the process of training, informing and developing the Circles to a point where they are self-sufficient and independent. Their back-up support can be made available if they have been adequately trained in the various QCC skills and if they possess social skills in handling fellow employees.

(iv) Organizational Environment

One of the factors required to facilitate QCC development is the availability of a conducive organizational climate for QCC to operate in. The organizational environment can be conducive when strong management support and commitment is made available. Management support is one of the several elements that play an important role in the success of QCCs. It is therefore necessary that every Circle program begins with obtaining the approval of management. Management support and commitment towards QCC can only be obtained when they have a good understanding of the concepts and operations regarding QCC. A lack of understanding of QCC will only weaken the entire program.

Support and commitment from management can also be obtained if there is a basic and widespread subscription by management to the practices and attitudes supportive to the QCC movement.

(v) Circle Management

In QCC the training aspect is vital to the continued development of the Circles. Training becomes indispensable to QCC. The lack of personnel trained in problem-solving techniques can inhibit the QCC development. A lack of trained personnel to undertake training in QCC-related

subjects can also make QCC lose its motivation and enthusiasm in the organization. Training therefore must be made an integral and permanent part within Circle management.

The reward system is yet another important dimension in QCC. It must be adequate enough to be able to motivate the participants, thus ensuring active participation from them.

### Internal Factors

#### 1. Circle Characteristics

The participants are important elements in any QCC programme. Their characteristics in terms of sex, age, racial distribution and educational attainment can help determine whether they will have a positive or negative influence on the proper functioning and development of the QCC groups.

Their perception of the various aspects of QCC operations too can have a bearing on the QCC activities of their organization. Their perception of the adequacy of the reward systems, of the various management attitudes, of the organizational environment, and of their leader abilities are important factors that can inhibit or encourage the QCC development in their organizations.

Another aspect whether members' participation is voluntary or not can also affect the QCC development in the organization. In fact voluntary participation is an essential rule in QCC.

## 2. Participants' Commitment and Active Participation

For any QCC to achieve much success, there must be positive commitment and active participation from the participants. It is important that they understand the QCC concepts and techniques well. A high level of understanding of the QCC concepts, philosophies and techniques can be achieved if adequate training is being extended to the participants.

## 3. Circle Operations

The Circle operations is an important aspect in the study of QCCs. The way the Circles go about their problem-solving activities will determine how much success they have achieved in the problem-solving process in QCC. For instance the level of attendance at meetings, the frequency of meetings and the presentations they make can influence Circle operations.

## 1.6 : Research Methodology

This section will describe two other methodological aspects, namely, the methods of data collection and the selection method of respondents for the study.

(a) Data Collection Methods

In order to achieve the data needs of the study, several methods/sources of data collection were used. They are as follows:

Books and Articles

The groundwork for the study began with some literature research on the subjects of QCC. This was done to familiarize the writer with the subject as well as to enable the researcher to build the necessary theoretical model for the study. Books and articles on QCC, organizational theory and small group research were focused on.

Interviews

After the groundwork has been done, indepth interviews and discussions were carried out with officers from INTAN so as to familiarise the writer with the subject matter. At the same time, interviews were conducted with the key individuals of both the organizations under study, so as to enable the researcher to get a closer look at some of the factors that can facilitate or inhibit QCC development in the respective organizations.

### Questionnaires

Two different sets of questionnaires were used in this survey as shown in Appendix I and II. (A pilot test was carried out earlier to test the validity of the questions. See Appendix III). One set was distributed to Circle members and leaders (the participants). Both close-ended and open-ended questions were used. Open-ended questions were used to provide the opportunity to probe deeper into the variables examined. The second set of questionnaires also adopted the same techniques as the former set but were distributed to the facilitators. Both sets of questionnaires were handed by the researcher personally through the assistance of some officers in both these organizations. A short period of time was given to the respondents to allow them to complete the questionnaire, after which the researcher collected the completed forms personally through the assistance of the key people in both these organizations.

#### (b) Selection of Respondents

There are two major sets of respondents: the Circle participants and the facilitators. The selection of both sets was through a census rather than a sample selection. The Circle participants (Circle members and leaders) of all the thirty-five Circles in both the organizations were selected.

Thirteen Circles were from the DFA, Ministry of Education. They represented all the Circles in existence at the time the survey was conducted in April 1986. The remaining twenty-two Circles were from the Ministry of Housing and Local Government of which twenty were from the Headquarters, and one Circle each from the Fire Services Department and the Department of Town and Country Planning. These Circles were in existence at the time the study was conducted on the organisation.

	DFA Min. of Education		Min of Housing & Local Govt.		Total	
	No.	(%)	No.	(%)	No.	(%)
Circle Members	83	(83.8)	105	(74.5)	188	(78.3)
Circle Leaders	11	(11.1)	21	(14.9)	32	(13.3)
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Total Participants	94		126		220	
Facilitators	5	( 5.1)	15	(10.6)	20	( 8.4)
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Total Respondents	99	(100%)	141	(100%)	240	(100%)
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No. of Circles	13		22		35	

Table 1.1: Sampling Design of QCC Study

As for the facilitators, all the twenty facilitators in both organizations were selected. Thus, taking all the Circle participants and facilitators, a total of 240 respondents were involved in the study, of which 220 were participants (members and leaders) while another 20 were facilitators. The breakdown of the respondents according to the respective organisation according to Table 1.1 shows that in the DFA, Ministry of Education, there were 94 participants (both members and leaders) and 5 facilitators making a total of 99 respondents from this organization covered by the survey. In the Ministry of Housing, although 126 participants were involved, 110 were from the Ministry proper (Headquarters) while 16 participants came from two Circles in the Fire Services Department and the Department of Town and Country Planning. All the 15 facilitators in this latter organization came from the Ministry and not from the Department level.

#### 1.7. Limitations of Study

Despite its valuable contribution, the study has certain limitations and the findings should be interpreted in the light of these limitations. The selected sample was confined to just two Ministries in the public sector. However, it is expected that



the problems raised and the recommendations made for resolving them may be equally applicable to other public sector agencies. Another limitation of the study is that only the DFA section of the Ministry of Education is studied while all sections and Departments in the Ministry of Housing and Local Government are surveyed.

#### 1.8 : Organization of Remaining Chapters

Chapter II will provide the background information on QCC so as to enable the analysis of the study to be seen in proper perspective. Chapter III will focus on the external factors which can have an influence on the proper functioning and development of QCC groups in the two organizations. The analysis in Chapter III will cover aspects such as: the QCC development and implementation strategies, the QCC organizational structures, the organizational environment, the Reward System and the training aspects. Chapter IV will examine the internal factors likely to influence the QCC group functioning and development. The analysis will cover aspects such as: characteristics of participants, the Circle operations, the Circle presentations and the perceptions of participants on the various aspects of the QCC system. Chapter V will summarize the research findings of Chapter III and IV and will discuss solutions for overcoming the weaknesses identified in Chapters III and IV as well as to provide other recommendations relating to QCC in the two organizations.