

CHAPTER IV

PARTICIPANTS' CHARACTERISTICS AND PERCEPTION, AND CIRCLE OPERATIONS

In the preceding chapter the focus was on what were considered as the external factors which can have an influence on the functioning and development of the Circles. In this chapter the focus will be on the internal factors. There are three broad categories of internal factors which can have an influence on the QCCs. First, the characteristics of the groups - such as sex distribution, age distribution and others may have an influence on the proper functioning and development of QCC in the two selected organizations. The second group consists of the operations of the Circles such as the frequency of meetings, attendance levels and problems identified with the Circle operations. The third group consists of the perceptions of members and leaders on the various aspects in the QCC systems in the two organizations. The purpose of this chapter will be (i) to present the data relating to these characteristics and perceptions of the Circle members and leaders and (ii) to examine to what extent the situation so obtained in each case constitutes a facilitative condition or an obstacle to the proper functioning and development of QCCs in the two organizations.

4.1 : Characteristics of Participants

The QCC participants (members and leaders) are important elements in the QCC system. Without them there will be no Circles and no programmes. The members form the heart of the QCC programmes and a proper usage of their untapped brainpower for the solution of the myriad problems of the organization is the key to QCC success. They must learn to apply the right techniques and in developing a cohesive team approach to solving various quality problems chosen by the groups. As for the leaders their importance can be seen from their role in guiding the activities and development of their Circles. They have to keep the Circles on the right track. Having examined the characteristics of the facilitators, a similar examination of the participants is also necessary. This can help determine whether these characteristics will have a positive or negative influence on the proper functioning and development of the QCC groups.

4.1.1 : Sex Distribution

The sex composition of the participants will tell us the percentage of male to female participants in the Circles and whether there is over-domination of one sex group over the other or a fair combination of both the sexes. Among the facilitators we saw earlier that the males are slightly more than the females. Among the leaders too, there seemed to be a similar tendency to have more males to females in both these organizations. In the

DFA, Ministry of Education as in Table 4.1 6 out of the 11 leaders are males. This accounts for 54.6 percent of the total respondents. In the Ministry of Housing, 76.2 percent are male leaders.

	DFA <u>Min of Education</u>	<u>Min. of Housing</u>
<u>Leaders</u>		
Male	6(54.6%)	16(76.2%)
Female	5(45.4%)	5(23.8%)
Total	11	21
<u>Members</u>		
Male	26(31.3%)	60(57.1%)
Female	57(68.7%)	45(42.9%)
Total	83	105
Grand Total	94	126

Table 4.1: Sex Distribution of Members and Leaders

QCC leaders are selected by members. Considering that there is a majority of female members - 68.7 percent of them are females in the DFA, Ministry of Education - one would expect the majority of the leaders to be females in this Ministry sample. However, from the above table, it can be seen that only 45.4 percent of the leaders are females. Thus it seems that female leaders tend to be disproportionately less than the size of their membership would seem to warrant. In the Ministry of Housing, it

is also clear that female leaders are disproportionately less than male leaders; females form 42.9 percent of the members but female leaders only make up 23.8 percent of the group leaders.

It is clear than that males tend to be disproportionately over-represented in the leadership position. The question which seems relevant is: to what extent is over-representation of males in leadership positions a conducive or detrimental factor as far as the groups' functioning is concerned? In our Malaysian society there is a tendency that males tend to carry more authority and respect than females. In this sense then, it may be beneficial to have disproportionately more male leaders because such leaders may make better leaders for the groups in that their advice and leadership may tend to be more easily accepted by the other members. In this way, they will help facilitate the groups' functioning.

It should be noted here that there have been no study done to show clearly that male leaders are more successful but until research shows otherwise, male leaders seem to have the advantage of being more readily accepted by other members as compared to female leaders particularly in an Asian society. So having disproportionately more male Circle leaders in both organizations may be considered good. However, it should also be noted that male leaders may possibly have certain inherent negative leadership styles. It is possible that male leaders may tend to adhere to authoritarian leadership styles and this may be

detrimental to the QCC groups because of its emphasis on the participation element. There is a possibility that female leaders may have styles more congruent with participation requirements in QCC groups. Until research findings on the link between the sex of leaders and the effectiveness of the groups become available, we may tentatively infer that in an Asian society male leaders may be more effective because their leadership tend to be more readily accepted and less open to questioning by members. If this is the case, then the overrepresentation of males in leadership position seems to be a facilitative factor in assisting the QCC activities in the two organizations.

There is another kind of analysis which can be made with regards to the data in Table 4.1. If in an organization, where QCC activities are overwhelmingly dominated by one sex group, this may not be a good thing. By 'overwhelmingly dominated', we refer to situations where one sex group makes up 80 or more percent of all total QCC participants. As to why overwhelming domination by one sex group is not good, this may be explained in the following manner. It appears from certain tentative research results that there seems to be a difference in problem-solving approach between males and females. Apparently, males tend to take a predominantly analytical approach to problem-solving while females tend to take an intuitive approach to problem-solving.

1. The researcher is unable to recollect the source for this 'theory'. The research results was reported in a newspaper article which the researcher read some time back.

If both sexes are fairly represented in problem-solving groups, then the two different approaches will be able to complement each other in the problem-solving process. Such complementing of different approaches will tend to increase the likelihood of finding solutions to the selected problems. If however, one sex dominates the group membership that is making up 80 or more percent of the group - then one approach will tend to prevail to the neglect of the other approach. This may reduce the efficacy of the group in finding good solutions. Looking at the two organizations, we note that in the DFA, 66 percent of the QCC participants are females and 34 percent are males and in the Ministry of Housing, 40 percent are females and 60 percent are males. Thus it would seem that in both organizations, that although there is greater percentage of one group, both sexes can be said to be fairly well-represented (no less than 34 percent males - in DFA and no less than 40 percent females - in the Ministry of Housing). So we may say that since both sexes have a fair proportion of representation in QCC activities in both organizations, the two different approaches to problem-solving, which it is suggested exist between the males and females, will be allowed to complement each other in the QCC problem-solving process in both organizations.

Having examined the sex distribution of the participants in both these organizations, we will now examine the extent of participation by the different sex groups. It would be

interesting to compare these percentage of female participation in both organizations against the percentage of females among the total of categories B, C and D officers in both organizations. In the DFA, Ministry of Education, the females make up about 60 percent of all employees in the B, C and D categories (the categories from which the QCC draws its participants). If we compare the percentage of female QCC participants of 66 percent against the proportion of females in the B, C and D categories (about 60 percent) we find that the two percentages are closely identical. This means that the females and correspondingly the males are proportionately represented in QCC activities. As for the Ministry of Housing, the females make up about 30 percent of all employees in categories B, C and D. The female participants on the other hand make up 40 percent of all QCC participants. Thus in the Ministry of Housing, this means that the females are only slightly over-represented in QCC activities. So, in both organizations it can be said that both sexes are more or less proportionately represented in QCCs. This can be said to be a good thing because if one sex is greatly over-represented it may then be inferred that the members of the sex group which is under-represented would seem to be relatively uninterested in QCC activities. QCC aims to draw as many employees as possible into its ambit of activities and if for some reason, some groups appear uninterested it will then fail in its objective of attracting as many employees as possible to its activities. In such a situation it may be necessary to determine why a particular group (or groups) appear reluctant to join QCC

activities and having determined that, to take steps to rectify the situation. However with regard to the organizations under study it seems that both sex groups are proportionately represented and thus there is therefore no sex groups which seems alienated from QCC activities.

4.1.2 : Race Distribution

An examination of the composition of the participants by their racial background would be required to determine the extent of representation of the different races in QCC participation. Since our population is a multi-racial one, a composition of participants with diverse cultural and religious backgrounds would help enrich group discussions for problem-solving purposes. The heterogeneity from the various cultural and religious factors may help to stimulate the production of ideas for problem-solving purposes.

<u>Leader</u>	<u>DFA, Min. of Education</u>	<u>Min. of Housing</u>
Malay	7(63.6%)	20(95.2%)
Chinese	3(27.3%)	-
Indian	1(9.1%)	1(4.8%)
Others	-	-
Total	11	21
<u>Members</u>		
Malay	71(85.5%)	92(87.6%)
Chinese	8(9.7%)	6(5.7%)
Indian	4(4.8%)	6(5.7%)
Others	-	1 (1%)
Total	83	105

Table 4.2: Racial Distribution of Members and Leaders.

In terms of the racial composition of members and leaders, it is discovered in Table 4.2 that the majority of them in both organizations are Malays. The Malay members make up 71 (85.5 percent) and 92 (87.6 percent) of the total in the DFA, Ministry of Education and the Ministry of Housing respectively. Among the leaders too the Malays predominate. Comparing the two organizations, a higher percentage of Malays is recorded in the Ministry of Housing where they make up 95.2 percent of the total number of leaders as against 63.6 percent in the Ministry of Education.

Appendix IV shows a higher percentage of Malay members in almost all Circles in the DFA, Ministry of Education. Twelve Circles have between 67 percent to 100 percent Malay members. Of these, four Circles are homogenously made up of 100 percent Malay members. Only one Circle has a racial combination of 50 percent Malays and 50 percent Chinese members. In the case of the Ministry of Housing, 20 Circles have between 67 percent to 100 percent Malay members (of these, 12 Circles are homogenously 100 percent made up of Malay members) while 2 Circles have an equal representation among the different races.

From the above racial pattern, it is clear that QCC participation is largely confined to the Malay employees. Representation by the other races is very insignificant. This is not suprising since there is Malay domination in the public service at the Categories B, C and D and thus it is to be expected that they will tend to form the bulk of the QCC participants in the public sector. So the preponderance of Malays in QCC membership merely reflects the fact that they form the bulk of the civil servants in service categories from which QCC draws its membership.

Thus, it is clear that QCC membership from the point of race is fairly homogenous. Would racial homogeneity in QCC membership be a disadvantage to the effective functioning of the Circles? If we were to look at the Japanese experience, there is definitely racial (cultural) homogeneity in the QCC membership

and yet the Japanese groups have been very successful. However, this should not be taken to imply that racial homogeneity is a plus factor in QCC activities. It has been found from experience of problem-solving groups (especially Operational Research Groups) that heterogeneity among the group members - albeit this is heterogeneity from technical backgrounds - has been conducive to stimulating creativity, a highly desirable commodity in effective problem-solving. It is possible that some elements of racial heterogeneity in group membership may help to foster better generation of ideas. If this is the case, then maybe attempts should be made to ensure such heterogeneity in QCC membership in the two organizations by allowing the small proportion of non-Malays in the relevant service categories to be over-represented in the QCC membership.

4.1.3 : Age Distribution

The age distribution of Circle participants can help us determine the level of experience and maturity of the groups and their capability to participate in Circle programmes. The age of Circle members in both these organizations range from less than 20 years to above 36 years old, as indicated in Table 4.3. In the DFA, Ministry of Education, the highest percentage of the members (48.2 percent) belong to the 26 to 30 years age group. In the Ministry of Housing too, the highest percentage (46.7 percent) of the members belong to this age group.

	DFA, Min. of Education	Min. of Housing
<u>Leader</u>		
21 - 25 years	3(27.3%)	4(19%)
26 - 30 years	4(36.4%)	6(28.6%)
31 - 35 years	1(9%)	9(42.9%)
More than 36 years	3(27.3%)	2(9.5%)
Total	11	21
<u>Members</u>		
Less than 20 years	3(3.6%)	1(0.9%)
21 - 25 years	25(30%)	19(18.1%)
26 - 30 years	40(48.2%)	49(46.7%)
31 - 35 years	13(15.7%)	26(24.8%)
More than 36 years	2(2.4%)	10(9.5%)
Total	83	105

Table 4.3: Age Distribution of Members and Leaders.

Those in the "below 25 years" category, make up 34 percent of the QCC membership in the Ministry of Education and 19 percent in the Ministry of Housing; as for the above 31 years group, the percentages are 18.1 percent and 34.3 percent respectively. From the above figures it is clear that although the largest group of members come from the "26 to 30 years" category, there is a fair representation of the less than "25 years" age group and the "more than 31 years" age group in QCC membership of the two organizations. The fact that the QCC membership is well-spread

among the various age groups may be healthy for the functioning and development of QCCs in these organizations. This may be explained in the following manner. The above "31 years" group will comprise officers who have been in the civil service for some time and are therefore knowledgeable and experienced in the procedures and other work aspects of the organization. They bring with them experience and knowledge which will be useful in the QCC groups' attempts to solve various work problems. However, this age group may have a certain disadvantage in that having being in the organization for some time, they tend to accept working conditions as alright and this makes them either non-critical about the weaknesses contained in the work procedures or are unable to see the weaknesses. This attitude to a certain extent may hamper the creativity aspect in them. The young group (less than 25 years), on the other hand, have not enough time to yet conform to the things as they exist in the organization. They tend to view the work procedures and other aspects from a fresh perspective. Hence, they bring with them a fresh outlook towards the work processes and as a result of this, they tend to be more creative in ideas. The middle group (26 to 30 years) can be said to combine the advantages of the two other groups. So by having a spread of membership among the various age groups, the Circles will enjoy the availability of creativity, experience and knowledge in their attempts to solve problems. With these assets, it means that their problem-solving efforts are more likely to succeed.

As for the leaders in the two organizations, none of them are below 20 years old. In the DFA, slightly more than one-third of the leaders are above 31 years old and a similar proportion are between 26 to 30 years while less than one-third of them belong to the less than 25 years category. In the Ministry of Housing, more than 50 percent are above 31 years old and 28.6 percent are between 26 to 30 years, while only 19 percent are less than 25 years old. From this it is evident that most of the leaders are people who are in the older age groups (from 26 years and above) and this means that they are matured people and have been in the civil service for some time. Maturity will mean that such leaders will be able to lead their groups effectively. Furthermore, being more than 26 years old mean that they have two other advantages. They have the advantage of age and in our society, age often carries with it respect. Secondly, it would also mean that they hold senior positions in their respective work categories. With this seniority too comes respect. So such older leaders will be more likely to be respected by the group members and this will make it easy for them to lead their groups in an effective manner.

4.1.4 : Education levels

(a) Members' Educational Attainment

For a QCC group to be able to successfully carry out its problem-solving activities it is essential that its members

should have a certain minimum level of education. Educational attainment plays its part in several ways. A member needs a certain level of education to be able to understand the QCC techniques and concepts which will be imparted to them in training. Understanding the concepts and techniques is one thing; to be able to apply them successfully to solving practical problems is yet another thing. The ability to apply what one learns to the process of problem-solving implies the possession of a certain level of intellectual development. There is one other aspect in which education attainment plays an important part. Part of the success in problem-solving by a group depends on its members' ability in their problem-solving efforts, and this ability tends to be enhanced by the continuous acquisition of information and ideas from various sources such as books and magazines. This means that members should have good reading habits and one prerequisite for the acquisition of good reading habits is a certain minimum level of educational attainment. Thus, for a group to be successful it is necessary for members to have a certain minimum educational attainment. This researcher feels that a minimum of SRP (Sijil Rendah Pelajaran or Lower Certificate of Education) is necessary for the QCC members to be able to acquire the QCC techniques and to apply them and to be able to obtain ideas from the various sources. This section will look into the educational background of the respondents to see whether their background is conducive to their QCC's problem-solving efforts.

<u>Education Levels</u>	<u>Ministry of Education</u>	<u>Ministry of Housing</u>
<u>Leader</u>		
LCE and below	-	-
MCE and SPVM	6(54.5%)	10(47.6%)
HSC	4(36.4%)	1(4.8%)
DIPLOMA	-	5(23.8%)
DEGREE	1(9.1%)	5(23.8%)
Total	11	21
<u>Member</u>		
LCE and below	5(6%)	20(19%)
MCE and SPVM	66(79.5%)	56(53.3%)
HSC	9(10.8%)	4(3.8%)
DIPLOMA	1(1.2%)	16(15.2%)
DEGREE	2(2.4%)	9(8.6%)
Total	83	105

Table 4.4: Education Levels of Members and Leaders.

From Table 4.4 above, it can be seen that 94 percent of the members from the DFA, Ministry of Education have educational qualifications of MCE/SPVM (Malaysian Certificate of Education/Malaysian Vocational Certificate of Education) and above, while in the Ministry of Housing, 81 percent of them have a minimum of MCE qualification. Given that the criterion for satisfactory level of educational attainment for QCC purpose is

set at LCE, it may be concluded that a very substantial majority of QCC members in both surveyed organizations have the required minimum educational attainment. Thus, it can be said that as far as the QCC members' intellectual ability to carry out successfully their QCC activities is concerned, it seems alright for both the organizations.

In terms of the distribution among the various educational levels in the DFA, Ministry of Education, a very large majority (79.5 percent) of the members have MCE qualifications with a sprinkling at the various other levels - 6 percent with LCE and below, 10.8 percent with HSC (Higher School Certificate) 1.2 percent with Diplomas and 2.4 percent with degrees. In the Ministry of Housing, the majority (53.3 percent) of the members also have MCE qualifications but there is a much greater representation of other educational levels in the membership - 19 percent with LCE and below, 3.8 percent with HSC, 15.2 percent with diploma and 8.6 percent with degrees. Thus there is a better spread in the Ministry of Housing than in the DFA. In other words, there is great heterogeneity in educational attainment among the members in the Ministry of Housing. As explained earlier, heterogeneity is often a plus factor in problem-solving because heterogeneity in background-in this case, educational background - tends to produce a synergic effect in discussions and hence lead to a greater output of creative ideas. With greater output of creative ideas, the likelihood of finding quality solutions to given problems will be greater. So it

appears that the Ministry of Housing has an advantage over the DFA, Ministry of Education, in terms of having a more heterogenous membership from the educational level aspect. It may help to improve the QCC situation in the DFA by having greater heterogeneity of educational level among its members.

Another fact which needs to be commented here is the presence of graduates among the members. Graduates with their training will be an asset to their groups in that they will be able to contribute substantially in the knowledge area. However, this advantage may be more than offset by a series of disadvantages inherent in the participation of graduates. There is a high possibility that the graduates may tend to dominate the groups' proceedings either because of their superiority complex or because the other group members may stand in awe of the graduates' ability. It should be pointed that graduates may not necessary be an abundant source of creative ideas. More likely, the other members collectively may have more creative ideas than the graduate members in a particular group. Thus, the dominance of the groups by graduates may hamper the generation of creative ideas which the group need to solve their selected problems. The reseacher feels that graduate participation in the QCC should be carefully looked into to ascertain whether their participation is a plus factor or not to the performance of QCC groups. For the present, it may seem that graduate participation may be a negative factor in that it may allow for dominance of QCC members by a small group.

(b) Leaders' Educational Attainment

As far as the leaders are concerned, none of them have qualifications at LCE and below. About 54.5 percent percent of them in the DFA, Ministry of Education and 47.6 percent in the Ministry of Housing have MCE/SPVM qualifications. However, those leaders with HSC qualifications and above make up a majority of 52.4 percent in the Ministry of Housing while they remained a minority (45.5 percent) in the DFA, Ministry of Education. Thus it appears that the leaders in the Ministry of Housing appear to be better qualified educationally than those in the DFA, especially when 5 of the leaders in the Ministry of Housing are diploma holders and 5 are degree holders as compared with only 1 degree holder and no diploma holder from the DFA Ministry of Education.

From the above observation, it may be derived that firstly, if we take MCE as a satisfactory level of educational attainment for a group leader, then it can be said that all the Circle leaders in both organizations have the required educational qualifications to perform effectively. Secondly the existence of graduate leaders to lead Circle activities may not turn out to be a good asset to the groups. They may have the ability to lead effectively, but their presence may deter active participation from members with educational attainment far below those of the leaders. The members may develop some form of inferiority complex in terms of their educational attainment which is far

below that of the leaders. When this happens a one-man show by the leaders is likely to happen, thus creating an environment where the leader dominates the Circle activities and participation by members become minimal. If this happens then it is an unhealthy trend in QCC and will not aid the development of the Circles. Here again, the researcher feels that the selection of the leaders by members should not be made on the basis of the former's graduate background. Perhaps it may be necessary on the part of the organizations to call off graduate participation at the members and leaders level.

4.1.5 : Training of Participants

In the earlier chapter we have examined the extent the facilitators have been trained to equip themselves to carry out the duties necessitated by their role. Similarly here, an attempt would also be made to determine the extent of training received by the participants. This is necessary because training is fundamental to QCC success. In the first place, the leaders must be sufficiently and adequately trained in the concepts and techniques of QCC. They undertake the training of their members and because of this it is very important that the leaders should attain adequate and sufficient understanding of the concepts and techniques in order to pass them on to the members. The latter also requires adequate training on these concepts and techniques in order to prepare themselves for the problem-solving process in QCC. Training therefore is indeed an indispensable part of

developing QCCs. Due emphasis must be given to training if we want QCCs to work in the public sector. Hence it is the intention here to look into the extent and adequacy of training accorded to the participants.

(a) Leader Training

As far as the leaders are concerned, rightfully they should receive training in two broad areas of (i) the concepts, tools and techniques in QCC and (ii) on how to handle groups. QCC has its own sets of tools and techniques for application, but first it is necessary that the leaders understand the QCC concepts adequately well before promoting the use of the QCC tools and techniques. QCC also involves group interaction and hence leaders must learn and acquire skills at handling social groups. Only then can the leader develop the group into a cohesive social unit for problem-solving process in QCC. Thus these skills are very necessary skills that must be acquired by leaders in order for them to operate the Circles effectively. As has been explained in the earlier paragraphs leaders undertake the training of Circle members and if they are adequately trained in these various skills, they are bound to be able to disseminate these adequately to their fellow members in the course of the training of the latter. The opposite will be true if they are poorly trained.

DFA, Ministry of Education

Skills	No. Leader	Total Leaders	No. Members	Total Members
1. QCC Philosophy & Concepts	5(45.4%)	11	25(32.1%)	78
2. Techniques of Analysis	5(45.4%)	11	22(28.6%)	77
3. Problem-solving procedures	6(54.5%)	11	23(30.7%)	75
4. Human Relations	4(36%)	11	21(28%)	75
5. Communication	3(27%)	11	14(18.7%)	75
6. Organising Circles	5(45.5%)	11	21(27.6%)	76
7. Leadership	2(18%)	11	15(19.1%)	78
8. Specialised Skills	2(18%)	11	7(9.3%)	75

Ministry of Housing

1. QCC Philosophy & Concepts	18(90%)	20	90(87.4%)	103
2. Techniques of Analysis	21(100%)	21	93(90.2%)	103
3. Problem-solving procedures	20(100%)	20	90(89.1%)	101
4. Human Relations	18(85.7%)	21	83(83.8%)	99
5. Communication	21(100%)	21	83(82.2%)	101
6. Organising Circles	21(100%)	21	88(86.3%)	102
7. Leadership	18(85.7%)	21	59(61.5%)	96
8. Specialised Skills	5(27.8%)	18	34(38.6%)	88

Table 4.5: Areas of Member and Leader Training.

First, we shall examine the adequacy of leaders' training in basic concepts and analytical skills. Among the leaders in the DFA, Ministry of Education, 6 out of 11 of them (54.5 percent) indicated they have been trained in problem-solving procedures. Table 4.5 above shows a minority (45.4 percent) indicated they have been trained on the philosophy, concepts and QCC techniques of analysis. In the Ministry of Housing a majority of them have been trained in these skills. Some 90 percent have been trained in QCC philosophy and concepts, while 100 percent of them have been trained both in the techniques of analysis and problem-solving procedures. It is important to note that these are the basic conceptual and analytical skills that must be learnt and acquired in order for the groups to go about their problem-solving analysis and the problem-solving activities successfully. Yet, a majority of them have not received training on these basic skills in the DFA, Ministry of Education.

The other category of skills which a leader must have are those relating to how to manage the group so that it will function effectively in its problem-solving tasks. The various skills in this category are human relations, communication skills, skills on organizing Circles, leadership skills and other specialized skills. As far as skills on human relations are concerned, only 36 percent of them in the DFA, Ministry of Education have been trained, while a majority of them from the Ministry of Housing (85.7 percent) have received training in this skill. As has been explained, this skill is very necessary for

the QCC process involves group dynamics and interpersonal relations. QCC involves the handling of groups as social units. As such it involves human relations in handling these groups in order to build up the Circle into a harmonious cohesive rather than a disintegrated unit. Yet only a minority of them have received training in this skill in the DFA, Ministry of Education. Communication skills must also be acquired so that the participants can communicate effectively among themselves in order to facilitate the problem-solving process. Here again, only 27 percent of the leaders have had training in this skill in the DFA, Ministry of Education as against 100 percent who have been trained in the Ministry of Housing. Training on skills in organising Circles is also important to enable leaders to manage the Circles effectively. Again while a minority (45.4 percent) have been trained in the DFA Ministry of Education, 100 percent of them in the Ministry of Housing have received training in such skills. Leadership skills are equally important in order to groom leaders for effective leadership in circle activities. Yet only 18 percent in DFA, Ministry of Education have received this training while a majority (85.7 percent) in the Ministry of Housing have received this training. Finally, some specialised skills such as motivation also need to be acquired so that the leaders can appropriately motivate the members whenever this is necessary. Only a minority from both these organizations indicated they have received training in this skill. It involves some 18 percent in the DFA, Ministry of Education and 27.8 percent in the Ministry of Housing.

It would seem that in the DFA, Ministry of Education the majority of the leaders have not received training on the various skills so necessary to facilitate them in undertaking leadership roles for the various QCC, the only exception being problem-solving procedures where 54.5 percent had such training. This organization seem to lack adequately trained leaders. It would be difficult for them to organize their Circles and its members into a cohesive social unit for problem-solving purposes. This is because due to the lack of training in these skills, it becomes difficult for them to better understand and appreciate what QCC is all about and to apply the techniques and problem-solving procedures in QCC. This would prove unhealthy in any QCC. On the other hand, a very substantial majority of the leaders in the Ministry of Housing have been trained in almost all the required skills, the only exception is specialised skills which have only been given to 27.8 percent of the leaders. Assuming the training received have been adequate, they stand a better chance than their counterparts in the former organization to better undertake and develop the Circles into a cohesive group, all ready for problem-solving in QCC. This is a plus factor for this organization. Thus, perhaps it is necessary for the DFA, Ministry of Education to give more serious considerations to the need for training of their Circle leaders.

(b) Member Training:

As for the members, the overall picture also indicate that the majority of them in the DFA, Ministry of Education have not received training on the QCC Concepts and Philosophies, Techniques of Analysis and Problem-Solving procedures. In the Ministry of Housing some 87.4 percent have acquired training on the QCC philosophy and concepts, 90.2 percent on the techniques of analysis and 89.1 percent on the problem-solving procedures. In other words, more than 80 percent of the members have received training on these basic skills in QCC. In contrast, in the DFA, Ministry of Education, only about one-third of them have received these training.

As regards the second category of skills, less than one-third of them in the DFA also have received training skills on human relations (28 percent) and communication (18.7 percent) while in the Ministry of Housing, more than 80 percent of them have received training in both these skills. Less than one third (27.6 percent) in the DFA Ministry of Education have received training on organising Circles and less than one fifth (19.1 percent) have received training on leadership while less than 10 percent have acquired specialised skills. On the other hand, 86.3 percent of them in the Ministry of Housing have been trained in organising Circles, 61.5 percent on leadership training while about one-third (a minority) of them received training on specialised skills.

Thus from the above analysis it is discovered that in both these organizations, those skills extended to the leaders are also extended to the members. While the majority of the members in the Ministry of Housing have been given training on the first seven categories of skills, this is not so among the members in the DFA, Ministry of Education. Training is vital to equip and prepare them to properly carry out QCC activities. Thus, one can assume that because of the lack of training, the members in the DFA, Ministry of Education would have the inadequate knowledge of the concepts and techniques and also would not have acquired the group interaction and other social skills required in administering the Circles effectively. This would act as an obstacle to the proper functioning and growth of the Circles in this organization. On the other hand, given that the majority of them in the Ministry of Housing, have received such training in the various skills one can deduce that they should be in a better position to organize themselves for the QCC activities and that they should be in a better position too to adopt and apply the techniques and problem-solving procedures in QCC. This is a plus factor for this organization. Perhaps, at this point because of the lack of resources to provide adequate training to members, it would be better for the DFA, Ministry of Education to limit the training of its members to just the basic skills such as the QCC concepts and philosophies, the QCC techniques and problem-solving procedures and ignore the second category of skills which, while crucial for group leaders, may not be so essential for Circle members.

4.1.6 : Reasons for QCC Participation

Here in this section, there is a need to explore the reasons for QCC participation to find out to what extent their participation is voluntary and also whether it is for the right reasons. As has been explained in the earlier chapter, voluntary participation is the cornerstone in QCC. When participation is voluntary, the participants would feel free to choose whether to join a group or not and even feel free to drop out from QCC participation. They would feel that their participation is not under compulsion. Participation is done purely because it is good for them. When participation is voluntary, trust is placed on the voluntary will of the participants. People can work on their own, and they will be motivated to take whatever steps on their own. Thus participants will decide the direction of their Circles on their own initiative and take actions on their own, and thus achieve their Circle objectives through the results of their own efforts. It is under such voluntary participation that the QCC programmes will continue to develop. However, if membership is forced on them, they will not have the incentive and right motivation to carry out the QCC activities. They would think that they are doing something under compulsion. With such a state of mind, it is unlikely that the QCC programmes would hardly succeed.

DFA, Ministry of Education

Reasons	Members	Leaders	Total Participants (Members & Leader)	Grand Total Resp.
1. Forced into Participation	5	31	36(38.7%)	93
2. To learn about QCC	34	4	38(40.9%)	93
3. Curiosity Sake	30	6	36(38.7%)	93
4. Self improvement	42	8	50(53.8%)	93
5. Improve working relations	49	8	57(61.3%)	93
6. Assist in promotion	17	2	19(20.4%)	93
7. Others-Raise productivity levels and course attendance	3	2	5(5%)	93

Ministry of Housing

Reasons	Members	Leaders	Total	Total Resp.
1. Forced into Participation	19	2	21(17%)	124
2. To learn about QCC	46	11	57(46%)	124
3. Curiosity Sake	33	3	39(31.5%)	124
4. Self-improvement	54	16	70(56.5%)	124
5. Improve working relations	63	13	76(61.3%)	124
6. Assist in promotion	9	4	13(10.5%)	124
7. Others-Raise productivity levels and course attendance	15	1	16(13%)	124

Table 4.6 : Reasons for QCC Participation.

The members and leaders were asked to indicate their reasons for participation. These reasons may be classified as voluntary and non-voluntary reasons. The voluntary reasons included the following: (i) to learn about QCC (ii) out of curiosity to find out about QCC (iii) for self-improvement reasons (iv) out of the need to improve the working relations and (v) to assist in the promotion process. Out of these voluntary reasons, two reasons were found to be cited by a majority of the participants of both these organizations and they are: for "self-improvement reasons" and "to improve the working relations within the organization". Some 53.8 percent of the participants in the DFA, Ministry of Education indicated participation because of self-improvement reasons, while in the Ministry of Housing, some 56.5 percent also indicated so. This should be a plus factor for the development of the Circles because participation is influenced by the desire on the part of the participants to improve themselves. They may be convinced that there are good results that can be achieved through participation in QCC. Thus the determination is there to further develop themselves. Hence one can expect active participation from these participants. For both these organizations too, the majority of the participants (61.3 percent) indicated the reason "to improve the existing working relations". This also gives a good indication that there is a desire on the participants' part for an improved working relations to exist within their organization. Thus one could expect there is determination in

them to participate. At least some level of enthusiasm can be inferred and when enthusiasm is positive we can be at least sure that there will be positive and active participation from the participants too.

As for the other voluntary reasons only a minority of them from both these organizations cited them as their reasons for QCC participation. For instance in both these organizations between 30 to 46 percent of the participants gave these reasons for participation:- (i) to learn about QCC and (ii) out of curiosity sake to find out about QCC. These two reasons may be deemed good reasons from the point of view that they indicate voluntariness. However, if they are meant purely for the sake of finding out and discovery without putting into use what has been acquired, then they represent negative motivation and participation. Such negative reasons will be detrimental to the the QCC development in their organizations. It may be a strain on the organization after all the training provided when members move in and out of participation just for the sake of discovering the QCC. These two reasons may encourage non-enthusiasm and non-active participation and this is unhealthy for QCC promotion within both these organizations.

The last type of voluntary participation is "participation for the sake of promotion". Only a minority of the participants (about 20 percent) in the DFA, Ministry of Education and (10 percent) in the Ministry of Housing, gave this as a reason for

participation. This has bad implications on the QCC development. There is expectation of promotion from such participants. Thus there is a condition attached to this kind of voluntary participation. Here again, there is no sincerity on the part of the participants. If promotion is not obtained, then one would expect a withdrawal from QCC participation. Such selfish reasons for participation will be detrimental to any QCC movement. It will stifle the development of the Circles within these organizations. Thus, although the percentage of such participants in both these organizations is small, nevertheless this reason should not be overlooked by the agencies concerned. Every attempt must be made not only to get voluntary participation but to be aware of volunteers who come in for selfish reasons.

Forced participation runs contrary to the basic tenets of the QCC philosophy. There is forced participation in QCC in both these organizations as revealed by the survey data. This is indicated by about one-fifth of the participants from the Ministry of Housing and by about one third of them from the DFA, Ministry of Education. When there is forced participation, such participants will not be committed to the QCC course and will not participate actively in the activities. With such reluctant participants, there is every likelihood that the QCC programmes will not be able to grow successfully. Hence, forced participation is indeed detrimental to QCC. There is therefore

the need for these two organizations to avoid forced participation and look into other ways of inducing voluntary participation that can be conducive to QCC.

However, some of the participants have identified other reasons for QCC participation. One of the reasons identified by them is they have attended a QCC course and because of this they feel obligated to participate in the QCC movement. If this is the case positive motivation for participation is lacking. This can be bad for QCC development in the organization. The other reason cited is "the need to raise the productivity levels of their organization" The reason carries with it positive motivation and members who join for such reason will be an asset to their QCC groups. However these two 'other' reasons were cited by only 5 percent of them from the DFA, Ministry of Education and some 13 percent from the Ministry of Housing.

Thus it can be seen that the reasons for participation in QCC varies from forced to voluntary participation. As has been explained earlier, forced participation should never be allowed to permeate the QCC movements. Nevertheless it does exist in both these organizations although it differs in varying degrees. On the other hand, voluntary participation should be encouraged to exist. Yet voluntary participation can accommodate many reasons some of which are selfish while some are non-selfish reasons. Hence even among voluntary participation it is the non-selfish reasons that should be encouraged to exist in order to ensure

long life to the QCC movement. On the whole it can be said that the majority of the members in both organizations have joined the QCC group for the right reasons.

4.2. : 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 their objective of finding solutions to their selected problems. Whether the group process is conducive to achieving success in problem-solving depends on a number of basic factors such as how frequently do the Circles meet and what is the level of attendance at meetings. Infrequent scheduling of meetings and poor attendance will definitely hinder the quantity and quality of results which the groups can achieve. Thus, this section will look into the frequency of meetings, attendance levels and problems which hinder the members from attending meetings.

4.2.1 : Frequency of Meetings

The frequency of meetings is one means of evaluating whether the Circles are operating in a conducive manner. It is said that Circles may be classified as active if the annual average meeting is 24 times or more. On the other hand, Circles

2

are inactive if the annual average meeting is 12 times or less.

From the Table 4.7, it can be seen that in the DFA, Ministry of Education, a slight majority (50.6 percent) of the participants indicated their meetings are held every fortnightly. Another 35.2 percent indicated the meetings are held weekly, while 5.5 percent, more than once a week.. The remaining of them (8.8 percent) have their meetings once in three weeks and once a month. This would mean that about 85.8 percent of them in this organization have their meetings once a week or once a fortnight. This can be translated to mean that 85.8 percent have their meetings four times a month or a minimum of twice a month, making it an annual average of 24 to 48 meetings a year. In the Ministry of Housing, 78.8 percent of these participants indicated their Circles meet weekly, some 13 percent say they meet every fortnightly while 3.3 percent meet more than once a week. The remaining 4.8 percent meet once every 3 weeks or monthly. Here again in this organization, it goes to show that about 91.1 percent of them have their meetings either weekly or fortnightly, making it a total of four times a month or twice a month. In yearly terms these 91.1 percent of the respondents have their meetings 24 times and more.

2. Japanese Union of Scientists and Engineers (JUSE), How to Operate QC Circle Activities (Japan: QC Circle Headquarters, 1985, p. 238.

	More than once a week	Weekly	Fortnightly	Every 3 weeks	Monthly	Total
DFA, Min. of Education	5 (5.5%)	32 (35.2%)	46 (50.6%)	2 (2.2%)	6 (6.6%)	91 (100%)
Min. of Housing	4 (3.3%)	97 (78.8%)	16 (13%)	3 (2.4%)	3 (2.4%)	123 (100%)

Table 4.7 : Frequency of Meetings.

Thus from the Table 4.7 above, it can be deduced that more than 80 percent of the participants in both organizations indicated their meetings are held at least once a fortnight although there is a small percentage (less than 10 percent) who indicated their meetings are held less than once a fortnight. Judging from the above performance, we can assume that the meetings can be said to be regularly held. By the Japanese yardstick (as mentioned in the earlier paragraph) the QCC movement can be said to be active in both these organizations. This would indeed be a good indication that the activities of the Circles are kept sustained through regular and frequent meetings and that the activity is an on-going process. This can allow for sustained interest and enthusiasm to be developed for the QCC movement. Thus, here again, it is a plus factor for the QCCs in both these organizations in the sense that the Circle meetings are held very frequently which can ensure that the QCC movement is sustained in both organizations.

4.2.2 : Level of Attendance

Attendance at Circle meetings is a good indicator of judging whether Circle activities are in a healthy state. By JUSE standards again, if attendance is 80 percent or less, the QCC is said to be not going well. On the other hand if attendance is 95³ percent and over, that QCC is said to be really doing fine. Thus it is the intention here, after examining the frequency of the meetings, to examine the level of attendance at these meetings.

Attendance Level	DFA, Min. of Education No. of participants	Min. of Housing No. of participants
Less than 50%	6 (6.5%)	4(3.2%)
50 - 80%	24 (26%)	31(24.8%)
80 - 100%	62 (67.4%)	90(72%)
Total	92 (100%)	125(100%)

Table 4.8 : Attendance Levels in Circle Meetings

From the table 4.8 above, it is discovered that in the DFA, Ministry of Education, a majority of the respondents (67.4 percent) indicated attendance levels at meetings to be above 80

3. Ibid

percent. On the other hand about 32.5 percent of them cited attendance levels to be below 80 percent. In this Ministry of Housing too, the majority of the respondents (72 percent) indicated attendance at meetings to be between 80 percent to 100 percent while 28 percent cited attendance to be below 80 percent. It would seem that for a substantial majority, the attendance at Circle meetings reached above 80 percent attendance in both these organizations. Such a high attendance levels achieved may indicate that enthusiasm at Circle meetings is high. If this is so, it is a healthy indication that the Circle meetings are well-sustained and should be an on-going process. The pertinent question here is: can we judge the performance of both these organizations by the Japanese yardstick? Here again we cannot measure our performance by the Japanese standards for we have only about four years of QCC experience in the public sector. Judging by our own standards of performance, we can assume that the Circles are going on well in both these organizations as far as the frequency of meetings and the attendance levels are concerned. This gives us an added advantage for the Circle movement. Enthusiasm can be generated among the participants. We can expect a longer life span for the QCC movements of both these organizations especially since the participants show high attendance levels and positive enthusiasm and attitude towards QCC. This augurs well for the development of the Circles in both these organizations.

4.2.3 : Circle Limitations

QCCs are group efforts. They are very useful devices for bringing about collective knowledge and judgement to problem-solving. Some problems require the coordinated efforts of people from different areas. Thus, through the use of QCCs, it would be easier to attain the cooperation needed for problem-solving. Similarly, when complex problems are resolved through integrated group discussions, the quality of the decisions would generally be better. However the QCC operations are subjected to certain limitations which can hinder their effectiveness as a group effort. It is therefore the intention here to examine these limitations such as problems pertaining to Circle meetings and attendance.

(a) Attendance Problems

	DFA Min. of Education		Min. of Housing	
	No. of Participants	Total Resp.	No. of Participants	Total Resp.
Problems with Attendance				
1. Participants too busy	79(88.8%)	89	69(61.6%)	112
2. Meetings not pre-arranged	12(14.6%)	82	18(18.9%)	95
3. Meetings held outside office hours.	2(2.6%)	78	4(4.2%)	95

Table 4.9 : Attendance Problems.

From the table above, it would seem that the majority of the participants in both organizations feel that their inability to attend Circle meetings is due to the fact that they are too busy with the daily normal office duties. Some 88.8 percent of the participants from the DFA, Ministry of Education and 61.6 percent from the Ministry of Housing cited this problem.

As far as the other two reasons are concerned, only a minority of the respondents cite them as causes for difficulty in attending meetings. In the case of 'meetings not pre-arranged' only 14.6 percent of them from the DFA, Ministry of Education, while 18.9 percent of them from the Ministry of Housing said that inability to attend meetings is because insufficient notice was given about meetings. The other problem is associated with meetings being held outside office hours. Only 2.6 percent from the DFA, Ministry of Education and 4.2 percent from the Ministry of Housing cited this reason.

Judging from the percentage of the respondents, it can be deduced that in both these organizations the major problem affecting attendance at Circle meetings is associated with the fact that the participants are too busy with their daily normal office duties. In fact, QCC participation is encouraged because workers are too busy to solve problems individually. On the other hand, attending to problems through the integrated manner of QCC would only make the problem-solving process effective and encourage better decision-making. Thus it is important that the

participants must be made to realise that QCC participation is required because participants are too busy to solve problems individually. QCC calls for the need to solve these problems not through individual means but through team efforts. Therefore in spite of the busy schedule, workers must find time for attendance at QCC meetings to solve problems in a concerted and team approach. The latter two problems regarding inability to attend meetings, may not seem to be major problems associated with attendance at meetings, judging from the fact that only a minority of the respondents indicated both these reasons. Nevertheless, this does not mean that they do not constitute a threat to the continued existence of the Circles. Certainly they should be looked into in order to further improve the attendance levels at Circle meetings.

(b) Problems in Circle Proceedings.

Attempts were made to seek some of the problems encountered at Circle proceedings. As shown in table 4.10 the problems identified were assessed to determine the relative importance affecting Circle operations.

Problems	DFA, Min. of Education	Min. of Housing & Local Government.
	Median Rank	Median Rank
1. Ineffective Interaction Among Members	3	3
2. Large Group Size	5	6
3. Members Lack Understanding of QCC	1	2
4. Unequal Work Distribution	5	4
5. Ineffective Leadership	3	3
6. Disinterested Facilitator	5	4
7. Lack of Information for Problem Solving	4	4
8. Members not free to choose mine problem	7	7
9. Members Lack Cooperation	7	7

Table 4.10 : Problems in Circle Proceeding.

From table 4.10, on the basis of the median ranks, we notice that the most important problem in the DFA, Ministry of Education as perceived by the respondents is "members lack of understanding of QCC". This is followed by "ineffective interaction among members and "ineffective leadership" which are ranked equally since both have similar median ranks of 3. Next in importance is the lack of information for problem-solving.

Following this we have three equally-ranked problems. They are "large group members", "unequal work distribution" and "disinterested facilitators". The least important problems are "members not free to choose problems" and "members lack cooperation". In the Ministry of Housing, the most important problem is also "members lack of understanding of QCC". The rest of the problems in descending order of importance are: "ineffective interaction among members" and "ineffective leadership (both ranked equally)", "unequal work distribution" "disinterested facilitators" and "lack of information for problem-solving" (all three equally ranked), "large group size" and finally "members not free to choose problems" and "members lack cooperation".

In both organizations, there is similarity in the priority assigned to the problems. In both cases, the top four important reasons have the same order of priority: "members lack of understanding" followed equally by "ineffective interaction among members" and "ineffective leadership" and "lack of information for problem-solving". In both cases too, the bottom of the list is occupied by two problems: "members not free to choose problems" and "members lack co-operation". Taking the most critical problem "lack of understanding of QCC", we find that if the members do not understand the rationale, objectives and other aspects of QCC, this will hinder the way they proceed with their QCC tasks. In the case of "ineffective interaction among members", the Circles will not function well, if members do not interact well. The members are the main actors in any QCC

movement. Hence if they do not interact well, the Circles will only collapse. It is also important that there is effective leadership provided in any QCC movement. An ineffective leadership would not be able to guide the participants towards building a cohesive team approach for problem-solving, Information must be readily made available. If information is lacking, this can hinder the problem-solving tasks. Therefore, there must be a system where information can be made readily available in order to facilitate participants for the problem-solving tasks in QCC. From the median ranks obtained, we can deduce that these four problems constitute major problems which can hinder QCC development in both these organization. As for the other factors identified here, they do not seem to be major problems in both these organizations. However, it does not mean that they do not pose a threat to the proper functioning of the Circles. These 'minor' problems, if allowed unchecked can undermine the operations of the Circles in both organizations.

4.3 : Internal and External Presentations

(a) Management Presentations

Mention has been made in the former chapter of the kinds of recognition systems found in these organizations. However, the recognition system thus covered did not include management presentations. Thus in this section, the management presentation as a form of recognition is covered here. Management

presentation is known to be the best method of recognizing the efforts put in by people in the QCC programmes. Job satisfaction can be obtained from such presentation when there are no other forms of rewards. Management presentations are known to have motivated the people greatly. It is also known to have greater motivating effects as compared to other benefits such as monetary benefits. Thus, it is important here to examine the proportion of participants who have had the opportunity to make such presentations within the organization.

	0 Presentation	1- 2 Presentations	3 - 4 Presentations	Total
DFA, Min of Education.	4 (4.4%)	83 (91.2%)	4 (4.4%)	91(100)
Min. of Housing.	4 (3.2%)	119 (94.4%)	3 (2.4%)	126(100)

Table 4.11 : Management Presentations.

From Table 4.11, it can be seen that in the DFA, Ministry of Education, 91.2 percent of the participants have had the opportunity to make one to two management presentations. This constitutes a majority of them. However, a very small minority (less than 10 percent) indicated either they have not made any presentations or have made more than two presentations. In the Ministry of Housing, some 94.4 percent of the participants too have made one to two management presentations. A small

percentage (3.2 percent) of them have not made any presentations while 2.4 percent have made three to four presentations.

Thus it can be deduced that the majority of the participants from both these organizations have had the opportunity to make one or two management presentations. Considering it is more than four years of QCC implementation now, one would assume that having undertaken less than two management presentations would seem to indicate that this recognition system is far lacking behind in implementation. In fact by the Japanese standards, they would encourage Circles to undertake at least two presentations a year. This Japanese yardstick would again be too high a standard for us to achieve. Nevertheless by making less than two presentations over a four year period does not appear to be adequate as a means of stimulating QCC group efforts.

(b) External Presentations

	No. Participants(%)	Total Participants
DFA. Min of Education.	30(32.3%)	93
Min. of Housing.	74(59.7%)	124

Table 4.12 : External Presentations by Participants.

While the level of internal presentation is not very satisfactory as indicated earlier, the extent of external

resentation is far worse. A majority of them have not made any external presentations. Here external presentations include presentations outside the unit be it at a branch level of the organization, Intan, or at the QCC Annual Convention. In the DFA, Ministry of Education only 32.3 percent of them have made such presentations. In the Ministry of Housing on the other hand a majority (59.7 percent) of them have made external presentations. Thus, it can be deduced that the percentage of participants who have not made any external presentations remained very high in the DFA, Ministry of Education (about 70 percent). The percentage in the Ministry Housing who have not had the opportunity is about 41 percent.

Thus it would seem that the majority of the participants in both these organizations are deprived of the opportunity to make presentations both internal and external to the organization, thus indicating that they would be deprived of the many benefits to be derived from such presentations. For instance in external presentations they would have the opportunity to discuss ideas with other Circles, groups and organization. They would probably get recognition which they have never had before. There is no denial that there is a lot of hard work in preparing the presentation. For the participants it would be enjoyable for most of them would have to prepare short talks, short reports, and visual aids. In short, the Circle would work as a team of professionals as they prepare to present

evidence of their achievement. Management presentations can promote communication and participation by management as well as the participants. The management would be personally informed of the activities while the Circle members would become assertive and learn how to talk in front of others. The presentations involve everyone and therefore can help develop togetherness in the Circles. Hence these forms of presentations is one area where it is much lacking in both the organizations. Therefore there is a great need for these forms of presentations to be encouraged to allow them the opportunity to participate.

4.4 : Participants' Perception

In the preceeding sections of this chapter, we examined the various factors which can have a bearing on the QCC activities in both organizations. Perceptions too can have an impact on the QCC functioning and development in the organization. Here we shall look at the perceptions of the participants on the various aspects of the QCC management and try to infer as to how these perceptions can contribute or obstruct the proper functioning and development of QCCs in these two organizations.

4.4.1 : Perception of Various Management Attitudes

Management commitment and support is undeniably important and must be present if we want QCCs to work in the public sector

organizations. It is in fact one of the several elements that play an important role in the success of QCC activities. Attempts will therefore be made here to find out the perception of the participants of the various management attitudes which can support management commitment in the QCC movement.

DFA, Ministry of Education

	No. Participants(%)	Total Resp.
1. Management always give recognition to workers' contribution.	60(69%)	87
2. Management prepared to attend to workers' problem.	59(67.8%)	87
3. Management always encourage harmonious worker relations.	65(75.6%)	86

Ministry of Housing

	Total Participants	Total Res.(%)
1. Management always give recognition to workers' contribution.	102(81.6%)	125
2. Management prepared to attend to workers' problems	85(68%)	125
3. Management always encourage harmonious worker relations.	100(80%)	125

Table 4.13 : Management Attitudes that can be Conducive to QCC.

As in Table 4.13, three management practices which are thought to be supportive or conducive to providing the environment for QCC have been identified. Between 68 percent to 80 percent of the participants from both organizations cited these three management practices as being adopted by management, thus indirectly providing the environment conducive to supporting the QCC movement. For instance, in the DFA, Ministry of Education, 69 percent of them cited "management always give recognition to workers' contribution". In the Ministry of Housing, a higher percentage of the participants (81.6 percent) is recorded to have acknowledged that management always give recognition to workers' contribution. Such a management attitude can be conducive to the QCC movement. It is very necessary that management recognition is accorded to workers' contribution for such recognition in QCC breeds motivation. When workers are motivated the impact is immeasurable on both the individual and the organization.

In both these organizations it is also discovered that management is prepared to attend to the workers' problem. This is acknowledged by 67.8 percent of the participants in the DFA Ministry of Education and 68 percent of them from the Ministry of Housing. Such a supportive management attitude again will be conducive for QCC purposes. QCC requires that management be ever prepared to attend to workers' problems presented by them. Finally, a good working relation between employees and between employee and employer is needed to facilitate the development of

QCCs. Poor working relations would only cause undue tension and dissatisfaction, thus not making it conducive for QCC. Some 75.6 percent of the participants in DFA, Ministry of Education and 80 percent of them in the Ministry of Housing acknowledged that their management tends to encourage the development of a harmonious working relations.

From the above it is clear that the above three positive management attitudes will contribute towards an environment conducive for management support and commitment in both these organizations. Thus it would seem that the management attitudes supportive of the right kind of environment for QCC are in operation in both these organizations. Management support thus should be easily and readily made available for QCC.

4.4.2 : Perception of Management Attendance at Circle Meetings

One means by which management support in Circle activities can be measured is by means of measuring their occasional attendance at Circle meetings. The participants (members and leaders) do not expect management to be present at each Circle meeting. Nevertheless the majority of them believed occasional participation and attendance can go a long way to boost their morale and participation levels in Circle activities. Some 90.9 percent of them from the DFA, Ministry of Education and 94.3 percent from the Ministry of Housing said that such attendance

can assist the development of Circle activities, as indicated in table 4.14.

	No. of Participants(%)	Total Respondents
DFA, Ministry of Education.	40(90.9%)	44
Ministry of Housing	33(94.3%)	35

Table 4.14 : Respondents Who Say That Management Attendance at Circle Meetings Can Assist Circles.

From Table 4.15, it is discovered that in the DFA, Ministry of Education, 52.7 percent of the participants indicated management have not attended their Circle meetings. In the Ministry of Housing the percentage of participants is even higher. Some 72 percent of them indicated management have not attended their Circle meetings. Thus the majority of them from both organizations indicated management non-attendance at their Circle meetings. This indicates that management support in this form is somewhat lacking.

	No. Participants(%)	Total Resp.
DFA, Ministry of Education	48(52.7%)	91
Ministry of Housing	91(72%)	125

Table 4.15 : Management Non-Attendance at Circle Meetings.

It can probably be explained that the Ministry of Housing is large and the number of Circles too big. Therefore it can be a strain if management were to call upon all Circles. However, it is occasional attendance that is expected by the participants. Management attendance can be an indication of the level of interest and enthusiasm in QCC. When the indication is positive, it would only be natural for the participants to follow suit by indicating positive attitudes towards QCC. Perhaps the management in both organizations had not realised the importance to the QCC participants of their occasional presence. If this is so, they should make some attempts to correct this situation before the negative impact of their non-presence begin to have effect on the QCC groups in these organizations.

4.4.3 : Perception of Leader Ability

As we are aware, in QCC the leaders are the pivot and the driving force for the groups under their control. It is undeniably important that they should have adequate levels of leader abilities in order to be able to integrate, orientate and direct the Circle activities effectively. We have already looked into the adequacy of leaders from the various aspects in the earlier paragraphs. However, there is another dimension to a leader's ability to lead his group. A leader may have all the necessary requisites to be a good leader but if, for some reasons, his group members erroneously perceived him to be lacking all the necessary requisites of leadership, they will

have no confidence in him as a leader and this will undermine his ability to lead them effectively. This section will therefore examine how the members perceive their leader abilities in the various areas.

Leader Abilities	DFA Min. of Education		Min. of Housing	
	No. Members	Total	No. Members	Total
1. Leaders' knowledge about organization	33 (47.1%)	70	85 (81.7%)	104
2. Leaders' knowledge on problem-solving techniques	33 (46.5%)	71	81 (78.6%)	103
3. Ability to lead	40 (56.3%)	71	72 (69.9%)	103
4. Ability to train effectively	31 (44.3%)	70	56 (54.9%)	102

Table 4.16 : Member's Perception of Leader Abilities.

For instance, the leaders must have sufficient knowledge about his organization before he is able to lead the members in the problem-solving tasks of QCC. If he has insufficient knowledge about his organization, his position as leader of the group will be undermined. It would only hamper his effectiveness as a group leader. However, in the DFA, Ministry of Education only 47.1 percent of the members perceived their leaders' knowledge about the organization to be adequate. In contrast, a majority of the members (81.7 percent) in the Ministry of Housing indicated that their leaders have adequate knowledge about the organization. The leader must also be competent in problem-

solving techniques for these techniques form the thrust of QCC. Being competent in problem-solving techniques would allow the leader to lead his groups in applying the techniques to the successful analysis and solution of their problems. To our surprise again, a minority (46.5 percent) of the members in the DFA, Ministry of Education viewed their leader ability on this to be adequate. In the Ministry of Housing, a majority (78.6 percent) of the members claimed adequacy of their leaders in this area.

Furthermore, a leader must have the ability to lead the Circles effectively. It is only with regard to this ability that the majority of the members in the DFA viewed their leader to be adequate. They comprise 56.3 percent of the total members. However, in the Ministry of Housing, 69.9 percent of the members viewed their leaders to be adequately able to lead the Circles. Assuming leaders have a sound grasp of knowledge on the QCC techniques and concepts, the leaders should be able to undertake effective training of his members. However, presumably because a minority of the members in the DFA, Ministry of Education only perceive as adequate the ability of their leaders on problem-solving techniques, only a minority of them accordingly feel that their leaders have the ability to train effectively. On the other hand, a majority of the members in the other organization (54.9 percent) viewed as adequate their leaders' ability to train effectively.

On the whole, the majority of the members in the DFA, Ministry of Education do not consider their leaders' ability in the various spheres of the QCC process as adequate except for their ability to lead. The negative perception of the majority of their leaders' abilities would mean that they may not have much confidence in their leaders and this will pose a handicap to the leaders in their ability to lead their groups in their prescribed problem-solving tasks. Their Circles would not be able to achieve much success if attempts are not made to rectify the negative perception of the abilities of their leaders. However in the Ministry of Housing, the majority of the members are of the view that their leader abilities are adequate. Thus, with this it is likely that the members will have confidence in their leaders and this will provide good rapport between the leaders and the member. Leaders and members would have mutual trust and will enjoy their participation and feel proud of their joint involvement. So it appears that in the DFA there is substantial negative perception of leaders' abilities by their members and to prevent this situation from negatively affecting the QCC performance, it is important for the organization to identify clearly such negative perceptions and to determine ways by which these negative perception can be eliminated. In the Ministry of Housing the leaders' abilities are perceived in a more positive light by their members; so the situation with regard to this perception aspect is alright in this organization.

4.4.4 : Perception of Adequacy of the Reward System

While the reward system as a form of recognition had been examined in the earlier chapter, here in this section, we will examine the perception of the participants with regards to the adequacy of the reward systems. It is important that the participants should perceive the system to be adequate. Only then could they be motivated greatly in achieving the objectives of the Circles. From Table 4.17 some 60.9 percent of the members and 71.4 percent of the leaders from the DFA, Ministry of Education perceived the existing reward systems to be adequate. In the Ministry of Housing, 60.6 percent of the members and 93 percent of the leaders also perceived the same.

	DFA, Min. of Education		Min. of Housing	
	Number (%)	Total	Number (%)	Total
Members	28(60.9%)	46	43(60.6%)	71
Leaders	5(71.4%)	7	13(93%)	14

Table 4.17 : Adequacy of Reward System.

It can be seen that about 40 percent of the members in both these organizations do not consider the reward systems as adequate. Among the leaders, about 30 percent in the DFA, Ministry of Education and about 10 percent of them in the Ministry of Housing also do not consider the existing reward

systems to be adequate. It would seem that more members than leaders consider the reward system to be inadequate. Thus it would seem that a higher percentage of members than leaders do not think that the reward system has been adequate. While the majority of members feel that the existing reward systems in both organizations are adequate, a substantial number (40 percent) consider them as inadequate. It may be necessary for the two organizations to ascertain why there is a substantial dissatisfaction with the reward system among the members in particular. Considering that the reward system is a very important aspect in ensuring QCC survival, perhaps it may be good if other attractive forms of rewards are considered apart from the existing rewards of certificate presentation.