

**AN INVESTIGATION INTO THE IMPACT OF USING QUALITY CIRCLES TO SOLVE WORK-RELATED PROBLEMS( A CASE STUDY IN THE ENGLISH UNIT OF DEPARTMENT OF HUMAN SCIENCES DEVELOPMENT IN DHOFAR REGION-SULTANATE OF OMAN)**

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**Abstract**

The research is a case study that aims to explore if quality circles can be a valuable tool to solve work-related problems in English unit in Dhofar Region, Sultanate of Oman. The researcher used checklists, observations and interviews to answer the research questions. Fourteen supervisors and the senior supervisor participated in this study by conducting quality circles in the second semester for four months and working together to solve major problems they face at work.

The results of the study show that quality circles can be a useful tool for solving problems. There are many benefits for using quality circles to solve problems such as promoting job involvement and sense of participation, developing communication, enhancing group work and developing the skills of problem solving.

Applying quality circles in semester two made it difficult for supervisors to implement their solution appropriately as they planned because of lack of time, which could be considered as a major factor that may affect the success of quality circles. Hence, the study recommended to establish Quality Circles from the beginning of the academic year in the English section of Dhofar region. Further research in other parts of Oman is needed to study the use of quality circles in the work of supervisors more widely.

**Key words:** Quality Circles, Work-related Problems.

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## **Introduction:**

Total Quality Management is a method by which management and employees can become involved in the continuous improvement of the production of goods and services. It is a combination of quality and management tools aimed at increasing business and reducing losses due to wasteful practices. It is a common method to improve the whole organization stepwise, structured and systematically according to hard work, discipline, intensive training, and consistent implementation of techniques and resources. (Rampersad, 2001)

In my work as a senior supervisor for English In the Ministry of education I am often called upon to join committees who have been asked to solve particular problems the ministry or teachers are facing. My experience of these committees is that they operate in a very top-down way and do not provide the right conditions for solving problems collaboratively. The purpose of this study is to explore the use of an alternative strategy for solving work-related problems- quality circles.

This study has been introduced to pay attention to the supervision side with a view to open up new horizon for the future of educational institutions at first. Second to get closer to achieve quality and service progress in general through the process of quality circles that has been a success in European, American, and Japanese communities.

### **1. Quality Circles**

Quality Circles in this study is used as a tool for solving problems that a group of supervisors face at work. These individuals meet autonomously, spontaneously, and willingly to discuss and solve these problems. The group carries on its activities continuously by means of periodic meetings. Part of the motivation and benefits for members of the quality circle is self-development and mutual development of the members. (Vaughn, 1990)

#### **1.1. Definitions of Quality Circles**

Several definitions of quality circles have emerged over the years. Gupta (2001) says that the most widely accepted definition for a quality circle is “ a small group of people doing similar work who meet voluntarily and regularly, usually under the leadership of their supervisors, they identify and discuss their work problems” (p.771). Jain (2001) states that quality circles give due recognition to the contribution of employees and deriving full benefit from their experience. They lead to higher productivity and better human relations. Basu (2004) indicates that the circle consists of people who work well together and who want to contribute to the success of the organization. He believes that quality circle will work if the following rules are applied:

- It consists of volunteers
- The problem to be studied should be chosen by the team, and not imposed by management.
- Management must whole-heartedly support the circle.
- The members of the circle are trained in working as a team (group dynamics), problem-solving techniques, and in how to present reports.
- The leader of the circle should be decided by the members.

The UK Department of Trade and Industry defines quality circle as “ a group of four to twelve people, coming from the same area, performing similar work, who voluntarily meet on a regular basis to identify, investigate, analyze, and solve their own work-related problems. The circle presents solutions to management and is usually involved in implementing and later monitoring them. (Fox, 1995, pp. 219-220)

We can see that the quality circle is a bottom-up approach for solving problems. The members of the quality circle are volunteers who meet regularly and work together to find

solutions to work-related problems. They are interested in contributing to the success of their organization.

### **1.2. Benefits of Quality Circles**

There are many merits of quality circles. They can be divided into two groups: benefits to the individual workers participating in quality-circle activities; consequential benefits to the organization as a whole.

#### **Benefits to the workers are as follows:**

- Important source of job interest which is not present in a routine job.
- Provides a sense of participation in deciding company policies.
- Builds competence in creating changes and provides a better preparation for a supervisory position.
- Enhances ability to work with others, i.e. inculcates team approach to problem solving. (Gupta, 2001)
- Develops job satisfaction and hence less turnover of staff. (Jain, 2001)

#### **Benefits to the organization are the following:**

- Development of complete coherent problem-solving methodology.
- Increased productivity.
- Enhanced motivation.
- Improved quality. (Gupta, 2001)
- Develops creativity and innovative spirit. (Jain, 2001)

Given the potential benefits of quality circles outlined here, the purpose of this study is to examine their use as a problem-solving strategy amongst a group of English supervisors I am responsible for.

## **2. Methodology**

This study reflects a case study. The researcher trained the supervisors to use quality circles as a tool to solve problems and guided them to form their own circles. The researcher was engaged in the quality circles and worked with them as a quality circle facilitator who can provide advice, mobilize resources to help the circle, co-ordinate the activities of existing circles, and help new circles to get started.

The study aims to explore if quality circles can be valuable tool to solve work-related problems in English unit in Dhofar Region. It attempts to answer the following research questions:

1. To what extent do quality circles allow the senior and regional English supervisors to work more cooperatively to identify work-related problems?
2. To what extent is this group of participants able to find solutions to work-related problems using quality circles?
3. What are the benefits for the participants in the study of using quality circles?
4. What major factors affect the use of quality circles to solve work-related problems?

### **2.1. Context & Participants**

A total of 14 regional supervisors and the senior English supervisor (myself) participated in this study. This group constitutes the whole population of English supervisors in the Dhofar Region of Oman. The group met in the normal course of its duties to discuss issues related to the supervision of English teachers and the study made use of these meetings to experiment with and study the use of quality circles. While I was part of

the group, my role was at the same time to train my colleagues in the use of quality circles and to study our experience of using this problem-solving strategy.

## 2.2. Data Collection and Analysis

This study utilized a variety of tools to collect data such as observations, semi-structured interviews and a checklist to be able to answer the research questions. The data were analysed using a combination of qualitative and quantitative strategies (drawing on suggestions in Punch, 1998, Hopkins, 2002 and Munn & Drever, 2004).

For observations, the participants were first trained in how to organize quality circles (see Jain, 2001). During the quality circles sessions themselves, I worked with my colleagues as a quality circle facilitator who can provide advice, mobilize resources to help the circle and co-ordinate the activities of existing circles. I was also an observer, and collected data using field notes to describe what was happening during the quality circles (see Simpson & Tuson, 1995; Cohen, Manion & Morrison, 2000 for advice on using observation as a research method). The data from the field notes were particularly relevant to the first two research questions. I observed five quality circles carried out over a period of two months, during which the group of supervisors was observed working together to identify a major problem and find a suitable solution. With participants' permission, the quality circles were video recorded to maximize the accuracy of the data collected.

Interviews were conducted with eight supervisors after the completion of the final quality circle. I designed an interview schedule (see Appendix 1) through which further information relevant to my research questions was obtained. Advice on the format and wording of questions from Drever (2003) was considered during this process. The interview questions were open in order to encourage longer and more detailed responses. The interviews were recorded, with participants' permission, then transcribed in full. The transcripts were analyzed closely and key themes were identified and categorized under headings relevant to the research questions of the study.

The checklist consisted of 11 statements which elicited respondents' views of the value of quality circles (see Appendix 2). Respondents were asked to express their degree of agreement with each statement on a scale of strongly agree to strongly disagree. The checklist were completed after the last quality circle in the study.

## 2.3. Reliability of the tools

The three tools were piloted before the actual study with the help of three senior teachers from the same region whose duties were similar to the duties of the participants involved in the actual study. I conducted quality circles with them for two days and tried out my observations, interviews and checklist. As a result of this process, the interview questions were further refined and some more statements were added to the final checklist.

## 3. Findings

### 3.1. Checklist Responses

Table 1 shows the mean responses for the eleven checklist items. Strongly agree responses were assigned a value of 5 and strongly disagree responses were assigned a value of 1. Higher mean scores reflect a higher level of agreement with a statement among the fourteen respondents.

The lowest mean here was 3.4, which indicates that respondents' level of agreement with all the statements was high. The overall mean for all 11 statements of 4.2 confirms this. Participants in this study, then, felt that quality circles were beneficial in a number of ways.

Table 1

*Mean Responses To Checklist*

	Mean
1 Making my job more interesting.	3.9
2 Promoting job involvement and sense of participation.	4.5
3 Identifying some of the more pressing problems in my work area.	4.4
4 Analyzing the problems.	4.6
5 Giving supervisors the opportunity to do something positive about the problems they face.	3.9
6 Developing problem solving skills	4.3
7 Developing creativity	3.4
8 Inspiring teamwork.	4.4
9 Enhancing motivation	3.9
10 Providing a useful forum for discussing work-related issues.	4.1
11 Developing communication between individual regional supervisors and their senior supervisor.	4.4

The checklist included an open-ended question asking the respondents to add any further comments on the benefits of quality circles. Only eleven supervisors out of fourteen responded to the question and two main themes were identified from their responses. One theme was that quality circles allowed participants to share ideas and experiences. For example, one supervisor wrote that:

It gave me the chance to discuss and share views on various topics, and surprisingly some of these were quite contradictory. It gave me an idea about what other supervisors do concerning certain aspects of our work, and this can be quite inspiring and motivating.

The second theme in supervisors' comments was that quality circles allowed participants to approach problem-solving systematically. One said that:

Actually, I found QC a more organized way of approaching problems we face as teachers and supervisors though the ideas and procedures are not totally new. Identifying the problems, analyzing them, suggesting solution, implementing them and getting feedback are all chained procedures that help solve problems appropriately and efficiently.

A key finding from the supervisors' responses to the open-ended question is four supervisors mentioned that they faced problems. These related mostly to the time this process required, particularly when the supervisors were in turn trying to use quality circles with the senior teachers they were responsible for:

This quality circle was beneficial, but the senior teacher was busy with his reports and other things too. He agreed that it is good and helpful, but not having enough time to do it was a real problem.

### **3.2. Interviews and Observations**

The analysis of field notes and interviews highlighted a number of themes relevant to understanding the use of quality circles as experienced by the participants in this study. The following are the findings categorized into four main categories that answer the research questions:

#### **3.2.1. Team Work**

All the interviewees – eight regional supervisors- said that quality circles are a good technique for getting them to know each other and to work as a team. They explained that

they worked as a group to share ideas, experiences, discuss many problems and to choose the one to focus on. For example, one supervisor explained:

We gathered together and made the group and first of all this makes us near to each other ... and we are thinking of problems from many different sights. Sometimes I find a solution and another supervisor finds another solution and then we come to each other and we see the best solution and we take it without any difficulties who is providing this solution, therefore we feel the group and we do our work friendly and frankly.

There was evidence of productive team work from the observations as well. It was clear that all the supervisors participated cooperatively in the analysis and discussions of their problems. They were constantly sharing ideas and experiences with each other.

### **3.2.2. Finding Solutions**

All the supervisors pointed out that they were able to come up with solutions to the problem being discussed. One supervisor, for example, explained that "quality circles led us to solve problems. We can find many solutions for each problem easily". Another supervisor explained in more details:

We found lots of solutions. So we organized ourselves in groups and discussed various problems faced by the teachers in the schools and at last we came to a decision that only by training we can help the teachers; conduct seminars, mini workshops in schools or seminars at the regional level. We provided the teachers with training materials and encouraged them to conduct two seminars. So they managed to conduct the seminars and the feedback explains clearly that they have benefited a lot. From their feedback it is obvious that they have benefited a lot from training materials. I found that their work in this area is improving.

From observations, it was clear that the supervisors were able to come up with an appropriate solution to the problem they identified. The training plan for senior teachers and teachers was a good solution but some supervisors could not implement it successfully due to time factor - it was difficult to apply the training plan late in the school year, when this study was taking place. Almost half of the interviewees agreed that it would be more beneficial if they started a training program at the beginning of the school year.

### **3.2.3. Further Benefits of Quality Circles**

In addition to the two categories already discussed, interviewees identified a wider range of benefits they felt quality circles had. These are summarized in Table 2 below. Once again, the value the supervisors placed on the co-operative and collaborative aspects of quality circles was clear here. Productive team work was a key ingredient in allowing them to identify suitable solutions to work-related problems. This process also gave supervisors a strong sense of involvement and responsibility for the decisions that were made, as the supervisor explained:

The most important thing is we decided the problem and we solved the problem by ourselves we do not depend on previous researchers or scholars or educators. We do not follow others like my boss review. We do not take instructions from others. Just we try to negotiate and try to discuss our problem and at the same time we can find and apply what is possible to solve this problem according to our beliefs and our understanding of the reality of the problem and we give the solution. We identify the problem and we go through the procedures and at the end of the day we are the people who can bring solutions and conclusions to our problems and I am sure there is a development because we know either we solved the problem or we need another quality circle to find more solutions or other ways.

Table 2

*Benefits Of Quality Circles Mentioned In Interviews*

<b>Benefits</b>	<b>Description</b>
A group based technique	Supervisors work together in groups to discuss various issues
Solving problems	They identify the problem, analyzing it to find suitable solutions
Sharing ideas and experiences	Supervisors exchange information and knowledge and learn from each other
Good relationships	Good connections between the members of the group which allow them to talk freely and honestly with each other
Improve the quality	Reach suggestions that help in improving their standard of performance
More responsibility	Allows participants to feel more responsible in making decisions
Very fruitful debate	Discussions during the meetings to express different opinions
Work at ease	State opinions comfortably without worries or problems
Showed me the right path to follow	Make it clear to the supervisor what to focus on when visiting schools and to think thoroughly about the plans to make for next year.

**3.2.4. Factors Affecting Quality Circles**

I also asked participants about the factors that affected the success of quality circles. The two most commonly mentioned factors were the availability of time and the degree of interest of participants in the process. Other factors mentioned by one or two supervisors were the experience and qualifications of the participants, how well they get on, and the degree of support provided by the top management.

Five of the supervisors said that choosing a good time for conducting quality circles is very important and has its impact on achieving the aims of quality circles. For example, one supervisor explained that " I think if we start it earlier, three weeks or a month earlier it will

be more beneficial". Another supervisor said " because of shortage of time as it is the end of semester two it was not easy to evaluate what I did".

Almost half of the interviewees indicated that the willingness of supervisors to participate in the circles has an effect on the process. For example, one supervisor explained that "It depends on the group -the team- if the team members are interested in carrying out this activity, I think it will work"

#### 4. Discussion

This study suggests that quality circles promote job involvement and sense of participation. The supervisors identified problems and how to solve them according to their beliefs and understanding of the reality of the problem. They did not rely on outsiders such as educators or people from upper management. They participated in making the decision. Basu (2004) also pointed out that quality circles encourage workers to become involved in making decisions that increase the quality of their work.

Dale & Plunkett (1990) indicated that one of the quality circles goals is to promote improved communication between participants. Almost all the supervisors in this study agreed that quality circles develop the communication between individual regional supervisors and their senior supervisor. Four of them suggested that it builds good relationships between the members themselves as well. They felt they were able to express their thoughts freely without any constrains.

The supervisors also believed that quality circles enhance group work. They worked together, sharing ideas and experiences cooperatively, to identify the main problems they face in the field. This finding supports the view reported by Gupta (2001) who pointed out that "quality circles enhances ability to work with others, i.e. inculcates team approach to problem solving". (p.772)

Supervisors' responses here also highlighted that quality circles could be considered as a good tool for solving problems. They agreed that through quality circles they were able to analyze the selected problem and identify the main causes of it. Therefore, they were able to find good solutions for the problem. This gives an adequate answer to the second research question, which was whether the participants are able to find solutions to the problems using Quality Circles. This supports the view of Fox (1995) who believes that quality circles enable the members to identify and analyze some of the more pressing problems in their own work area.

Jain (2001) suggests that quality circles develop creativity and innovative spirit. There was less evidence of this here and creativity was the potential benefit supervisors felt they experienced least. One reason for this may have been time pressure, as supervisor needed to identify and implement solutions to their problems in a short period of time at the end of the semester. They may have thus opted for ideas that were practical and easy to implement rather than trying to be creative.

The study has also highlighted some factors which participants feel influence how successful quality circles are. As Dale & Plunkett (1990) suggest, the availability of time is clearly a requirement, both for groups to meet as well as for them to implement the actions they agree to take for solving the discussed problem. In this study, a number of the participants were unable to implement their actions due to the demands of other responsibilities at what was a very busy time of the school year. Also some participants indicated that the willingness of supervisors to participate in the circles has its effect on the issue. If the supervisors are interested to play a role in solving their own work-related problems, they will be able to work cooperatively to find proper solutions. This finding supports the view of Jain (2001) who claims that each circle consists of people who are willing to contribute in improving job effectiveness and work performance.

#### **4.1. Limitations**

Quality circles seemed to be beneficial in the context studied here and the participants reported very positive views about this process. In interpreting these results, though, it is important to acknowledge that my enthusiasm for quality circles may have influenced the views that the supervisors participating here expressed ( I am, after all, their manager). It is likely, for example, that more could have been said about the challenges that quality circles presented, yet there was not much data on such issues here. The results of this study also apply only to the group studied here. Further research in other parts of Oman is needed to study the use of quality circles in the work of supervisors more widely.

#### **5. Conclusion**

This study suggests that quality circles can be a very useful tool for solving work-related problems. The participants found quality circles beneficial to their work in a number of ways, particularly in involving them in decision-making, promoting good relationships among colleagues, encouraging team work and developing problem-solving skills. The study has also been very beneficial for me as a senior supervisor; quality circles provide me with a strategy through which I can collaborate with colleagues in addressing the problems that we and our teachers face. I am confident that supervisors in other parts of Oman could benefit from applying quality circles in their contexts too.

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