SUMMARY AND CONCLUSION

In this chapter, the overview of the study and a summary of the research results are reviewed. The implications, limitations of the study and recommendations for future research are also discussed.

Overview of the study

PPS activities . The respondents, were conveniently selected from various departments and from different job functions in Motorola (M) Sdn. Bhd. Usage of secondary data and interviews were other methodologies used for the purpose of this research.

The study attempted to find whether the PPS teams in Motorola had all the relevant characteristics that were important for the success of the program . Some of the key aspects are the voluntary nature of the PPS, the training provided and the rewards given . Respondents were also asked on their level of participation and the problems they had encountered as a team. The types of problems solved and the basis of the formation of the teams were used as an indication on whether the PPS teams could facilitate continuous improvement.

The organization's preparedness in confronting future needs of the team was also evaluated. General perceptions of the respondents on the level of management support on

the PPS activities was revealed in this study. Another concern peculiar to team activities

on how to perpetuate the lifecycle of the PPS teams were discussed in this report.

Finally, the tangible and intangible benefits of the PPS activities were explored and

evaluated to see if they had met both the individual and the organization's needs.

Summary of Research Results

The survey revealed significant amount of information on the PPS activities in Motorola.

It had provided an overview of the participants' general perceptions of the activities.

Overall, the PPS activities in Motorola (M) kept the basic concepts of QCC; such as

voluntary in nature, teams using various tools and rewards are given etc.

Team Formations

A typical team consist of 10 members and the production area was where it all started .

The types of problems solved were mainly related to quality improvement and

productivity. This justified the fact that most of the circles started working on quality

and productivity problems (Ingle, 1982). A review of the 1995/1996 completed projects,

indicated that there were new types of problems that the team had solved. This was in

line with the need to respond to rapid technological change in the company. Some of the

teams worked on new product introduction problems as well as computerization and

integration of systems.

It was observed that more teams were initiated out of the members own initiative to solve a particular problem rather than based on the decisions of the management . This supported the TQM philosophy of bottom -up management in an organization, so as to achieve continuous work improvement (Spenley, 1994).

Most of the participants had participated in more than one team. When asked what made them want to continue being in a team, some respondents replied that it was the excitement of working in teams and a chance to travel to the United States for the TCS presentation. The reasons for participation were varied. However, one revelation from this survey, was that they were not forced by the management. The rest of the reasons given tend to indicate a degree of voluntarism whereby, the respondents were seeking for self-fulfillment and self development . The basic principle of the PPS was to keep the program voluntary in order to extract the maximum benefit from the program (Dewar, 1980) and this seemed to have worked in Motorola.

Level of participation

How active the participants had been and how involved they were in the PPS activities were also evaluated in the survey. The teams met once a week or once a fortnight during working hours and each meeting lasted last for about an hour. Some however, met after office hours and the reason given was due to the difficulty in arranging the meetings with members of different work shifts. The attendance level was generally satisfactory. Poor attendance was mainly attributed to the tight work schedules of members and that they came from different shifts. The level of participation was found to be high with 71 to 90%

of the members contributing their ideas during the brainstorming sessions. The survey indicated that almost all of the respondents received some type of training before participating in the PPS activities. This could perhaps explain the high level of participation of members.

Difficulties Faced

Nevertheless, the teams did encounter some problems.Some respondents confessed that one of the problems was the lack of understanding of PPS tools and process, though it was not significant enough to be the most crucial problem. The unequal work distribution and no teamwork were some of the other problems encountered by the teams. This could be due to the unequal distribution of members with experience on PPS and those who were relatively new to the activity. The TPI committee of Motorola had tried to improve the lack of understanding of PPS tools by providing the relevant training and a PPS guidebook. The PPS guidebook was found to be beneficial to the members as it provided a step by step guide to organize the PPS projects.

Management Support

Management support is one of the several elements that plays an important role in the success of Quality Circle activities (Ross & Ross, 1982). Generally the respondent perceived that there were strong management support given to the PPS activities. The general view was that the management did acknowledge that the that PPS can develop good work attitudes among workers. They also supported and provided guidance to the PPS teams. This fact was supported by the fact that management's presence in some of

the teams' meetings was high and that some of the teams sought the help of their managers other than their facilitators whenever they had problems.

The respondents were generally satisfied that the management recognized their contribution by providing appropriate rewards. They were proud to have the opportunities to present their solutions to the top management. Nevertheless, there were varied perceptions on the amount and the types of rewards that were given. The biggest rewards was in a form of traveling to selected destinations for a showcase presentation. Souvenirs and special gifts were given to those who have participated but did not meet the required criteria.

There was a concern however, on the management's support in monitoring the progress of teams in a timely manner and the willingness of management to attend to the employees' problems. Monitoring the team's progress was vital to ensure that the team moved in the right direction . The TPI coordinators, through an interview, said that although there was a centralized committee to oversee the general activities of the PPS, monitoring the progress of each team should however be left to the managers of the department to execute.

Empowerment of employees and the energy that comes with the feeling of ownership are necessary prerequisites for continuous improvement (Wellins, Byham and Wilson 1994). This study showed that employees at Motorola were empowered to make decisions more than 51% of the time. There were a variety of decisions that the members were allowed to make , mostly on administrative considerations such as communication

to higher levels of authority and determining the work assignments of teams. However, where the budgeting and cost is concern, the autonomy to decide was minimal.

Perpetuating PPS Efforts

One of the great concerns in the implementation of PPS, was the way to make the PPS teams remain active as long as possible. During a recent National QCC Convention 1996 a judge expressed her concern about the inactive ' old teams'. It appeared that there were other organizations faced with the same dilemma. The QCC should remain active and seek for opportunities further improvement. With the experience they had from the previous activities they should be prepared to contribute more effectively. The survey showed that continuous motivation from the leaders and facilitators as well as the active participation from the management could prolong the activities of the PPS teams. Procedurally, they believed that a regular progress report should be submitted to management so that teams would be enthusiastic all the time.

Tangible and Intangible Benefits

Assessment of the benefits accrued from the PPS activities were part of the research objectives. Basically, the individual needs based on the Motivation of PPS Model (Perigord 1990) were met. According to the respondents, they had managed to develop their self esteem and some hidden potentials. Technically, they had basic computer knowledge and skills which had enhanced their job competency and thus took care of their job security needs. They had also learnt to work with others as a team. The organization was said to have gained too from the PPS teams activities, as indicated in their key

performance indices and productivity. PPS had also created the kind of atmosphere that was conducive for working and learning such as an atmosphere where teamwork and harmony were evident.

A review of the 1996 team projects, showed that a total of USD 6.0 million potential savings were observed. One team claimed that they had successfully achieved a productivity improvement of 12X and another spotted a 144X improvement on the response time to their customers. Some managers perceived that the benefits of teams may be based on the monetary and productivity measurements in the short run. However in the long run, it was what the PPS could do to develop the human dimensions that was vital to the organization survival. There were many tangible and intangible benefits that PPS teams had contributed. Most importantly, the objectives of the PPS programs had been met. Nevertheless, based on the survey, there were rooms for improvement.

IMPLICATIONS OF THE STUDY

The study showed that PPS activities based on the old but wise concepts of the PPS could still work in today's environment. If adequately organized, the benefits obtained can be abundant.

The characteristics of the teams in today's environment have changed in terms of the scope of the problems they had solved and the involvement of all levelsof manpower in the organization both horizontally and vertically. The types of problems solved had

become more complex and this had forced the PPS teams to go across boundaries, involving members from otherr departments and from other parts of the. The involvement of the middle management employees like the engineers, section heads and even managers were apparent in the PPS activities in Motorola. One team even had four department managers as members of a team. The trend of the management teams participating in competitions is increasing. This is truly an indication that the PPS activities is applicable to all levels of people and can bring benefits to the organization..

Having a centralized committee to oversee the overall PPS activities is essential to ensure a smooth implementation of the process. To help ensure that every participating team follow a standardized format in of problem solving, the committee should develop a guide defining methods and steps that are expected to be taken by the team. Nevertheless, managers are cautioned not to just leave the responsibilities to such committees.

The findings of the study , like other studies on company-wide program, require the undivided attention of the management. The support should come right from the top of the organization. In an empowered environment such as those created by the PPS, there is a need to transform the traditional organizational structures. Table 28 demonstrates the key differences of the traditional and the empowered team organization which managers need to comprehend and reorganize, in order to get the optimum from the team efforts.

Table 28: Key Differences Between Traditional and Empowered Team Organizations

Element	Traditional	Empowered
Organizational Structure	layered/individual	flat/ team
Job Design	narrow-single task	whole process-multiple tasks
Management Role	direct / control	coach/facilitate
Leadership	top down	shared with team
Information Flow	controlled/limited	open/shared
Rewards	individual/seniority	team based/ skills based
Job Process	managers plan, control, improve	teams plan, control, improve

Recommendations

Every organization must attempt to retain its competent employees. Training needs will increase along the growing complexity of the technological, economic and social environment. To keep pace with an increasing complexity, Juran (1987) recommended that all employees must be trained each year. In lieu of this the training needs for the PPS members will need to be reviewed along the line of these changes. New PPS tools and techniques need to be developed as more complex problems must be solved by the PPS teams. An emphasis on self development types of training like the public speaking skills and presentation skills as well as project management and team relationship skills are also essential (Lawton, Murphy and Terry 1992)

Measures of team performance are important in order to gauge the capabilities and effectiveness of the teams. The significance of the cost and benefit relationship must not be overlooked. Because there are various aspects to the PPS programs, there should be

more than one way of evaluating the program. It is recommended that not only pure numbers and tangible aspects of the benefits that must be reviewed, but also that of the human aspect. Perhaps one would be to measure the workers satisfaction and perceptions regularly (Ingel, 1982).

LIMITATIONS OF STUDY

The observations of this exploratory research should be interpreted within the limits of the sample size (195), sample choice (convenience sampling) and time (5 weeks) constraints.

One important limitation is the unequal distribution of respondents in terms of job functions. The respondents were mostly from the production operators category. Due to this reason, certain characteristics such as the difference in opinions based on job functions could not be performed. Nevertheless, secondary data and information from interviews conducted with the relevant personnel were used to fill the deficiencies where possible. A larger sample size, with balanced job categories, would have made generalizability of the results more meaningful and effective.

The assessments made in the report were based on opinions in determining the monetary equivalent of improved productivity or product quality for the long term survival of the organization. However, it is not the intention of the author to include monetary equivalent

gains from this study, since the greatest benefits stem from the long term strategic advantage obtained if the PPS concept is fully and successfully implemented.

Nevertheless , despite this shortcomings, this study has helped in understanding the PPS concepts and its applicability to a manufacturing company in the current business scenario. The positive findings and observations on how the PPS concepts are incorporated in an organization, could perhaps be a benchmark for other interested organizations to attain the maximum benefit when implementing this program. The empirical results could provide some input for future references and challenges for those would like to pursue the study further.

RECOMMENDATIONS FOR FUTURE RESEARCH

This study could be the basis for a more comprehensive study on the subject of teamwork in an organization. Besides adding to the pool of local studies of similar nature, it can be used for comparative purposes for future studies.

One avenue for further research is a study on the influence of different cultural and personality differences of employees on their willingness to participate in teams. For example, a study on the Malaysian teamwork attitudes as compared to the Japanese and the American employees and its effects on the success of the such programs should be observed.