10.0. INTRODUCTION

One of the major emphases by TPM concept is the involvement of human resources in maintenance quality improvement projects. For example, TPM concepts envisage the creation of self-ownership feeling the minds of employers. Likewise, suggestion statement is suggested as a technique to involve employees in TPM programmes. In order to exercise these techniques and models in TPM projects employees must be psychologically enthused. This is possible by applying suitable counselling techniques in TPM projects. However, no TPM researcher and practitioner have so far emphasised the role of counselling for maintenance quality improvement. In order to overcome this deficiency, a strategy titled as 'Maintenance Quality Counselling' was included in SMQE model and its practical feasibility was explored. The details of this module of this doctoral work are presented in this chapter.

10.1. COUNSELLING AND ITS TYPES

Psychologists have been dealing with employee counselling right from the beginning of this century. However, the need of employee counselling was not realized till recently. To be precise, it is found that employ counselling is being given significant trust only from 1980s. From this period, exclusive books and articles on employee counselling have been emerging. Little later, employee-counselling began to assume special importance. Depending upon the specific needs, the researchers have identified different types of employee counselling. For example, Keith Davis (Flippo, 1984) classifies counselling into three types namely directive, non-directive
and co-operative. According to him, directive counselling lays emphasize on the dominance of the counsellor than the counselled during the counselling process. The non-directive counselling is also referred to as client-centered, which basically aims to converse with the counsellor for obtaining a solution. Co-operative counselling begins with an emphasize to the non-directive approach and then transits to a more directive approach. A critical analysis indicates that these methods are more static than dynamic. That is, these methods envisage the conduct of employee counselling program at different intervals of time, rather than on a continuing basis. In manufacturing environment, particularly while applying today’s maintenance quality improvement approaches, these static employee-counselling methods will not be effective.

Little recently, Fischer et. al. (1997) have recognized different types of employee counselling from the point of view of modern life. These types are marital counselling, family counselling, and alcoholism counselling. This classification is based on particular individual’s private life. These types of counselling emphasize on the appointment of either full time or part time counsellors. In fact these employee-counselling methods are addressed under the terminology Employee Assistance Program (EAP). EAPs are secluded from the purview of the management views. In other words, EAPs are not coupled with the organization’s main stream of working. Hence, employee-counselling program under EAP will not be very effective in continuous maintenance quality improvement projects. Thus the review of the nature of the existing theories on the employee counselling indicates that refined methods should be proposed to make employee-counselling programs compatible to continuous maintenance quality improvement projects. Such methods proposed
during this research work are presented with brief descriptions in the following sub-sections.

10.1.1. Formal and Informal Counselling

Formal counselling calls for pre-programming of the activities and procedures to be followed before employee counselling activities are started. For example, if an employee is to be counselled with regard to careful exploitation of the training he had towards enhancing the maintenance quality, then he can inform the counsellor who is approaching him. The employee may also be informed in advance about the procedures to be adopted by the counsellor. In this case, the employee is given the opportunity to prepare himself before he meets the counsellor.

On the other hand, in the case of informal counselling, a counsellor approaches an employee at anytime with a flexible procedure. For example, a counsellor may visit the research and design department to investigate the reasons for a few employees utilizing the resources unproductively. The counsellor may approach the employees without following rigid procedures to counsel them.

10.1.2. On-line and Off-line Counselling

On-line counselling is nothing but counselling the employees when they carry out their duties. For instance, a supervisor who has been dull over a certain period of time due to change of his work location, may be visited by the counsellor at his work place itself and may offer his services to make him adapt to the new environment.

Off-line counselling deals with employee counselling activities that are carried out prior to the starting of routine duties by the employee. For example, a counsellor may counsel an employee who has been transferred to a new location with or without his willingness, before he starts his duties.

10.1.3. Internal and External Counselling
Internal counselling deals with the problems that take place within the organization. Some of them are fear of retirement, supervisor versus junior conflicts, frustration due to lack of management interest, etc. For example, an employee who feels his ideas and suggestions are not considered seriously in spite of his rich experience may be counselled to evolve suitable solutions.

External counselling deals with the problem that takes place outside the boundaries of the organization. Some of them include drug addiction, excessive alcohol consumption, legal disputes, financial crisis and marital problems. For example, an employee who has been facing problems with his neighbors over owning a piece of land adjacent to his house may be counselled, so that he trains his mind to free himself from worrying about that problem.

10.1.4. Periodic and Need-based Counselling

When counselling is imparted periodically, that is over a fixed cycle of period, then it is known as periodic counselling. The general problems such as increased workload, poor working environment, inadequate exposure to the new job etc. can be dealt with by periodic counselling.

On the other hand, need-based counselling is imparted when any sudden requirement arises. For example, when an employee is asked to work in a new shift, the timings are fixed and are not at all flexible. In this case, anticipating the outbreak of frustration of that employee, a counselling package to overcome the situation may be immediately designed and employed.

10.1.5. Vertical and Parallel Counselling

Some of the counselling tasks can be carried out from either upper or lower categories of fellow employees. For example, if a works manager is deeply worried over the difficulty in achieving the production target, he would lament about this
condition to the supervisor. The supervisors may counsel him by pointing out that alternative solution exist to face this situation. This would induce the works manager to thrive towards achieving the target. This type of employee counselling is termed as vertical counselling.

In a situation where the employee finds the work environment not conducive, fellow employees of the same level may counsel him so that he can get acquainted with the surrounding. This type of parallel counselling gains importance when an employee enters into a new job or company. The new work place may be alien to him. In this situation, parallel employee counselling can be employed.

A careful scrutiny of these types of employee counselling indicates that all types of employee counselling are essential in SMQE process. However, each type has to be applied in proper proportions, in appropriate cases. On the other hand, it can be easily inferred that in order to apply an employee counselling program, the involvement and support of all the employees are essential. This indicates that all the employees in the organization should be assigned responsibilities, either directly or indirectly, for carrying out the employee-counselling program with the primary intention of enhancing the quality of human resources. These observations very much coincide with the principles of SMQE.

10.2. QUESTIONNAIRE BASED EXPLORATIONS

In order to explore the practical feasibility of maintenance quality counselling, a questionnaire as shown in questionnaire 10.1 (given in annexure A) was prepared and the responses were collected from Coimbatore unit of Associated Cement Companies limited (ACC).

Before framing up the questionnaire, it is essential to note the following two things:
• What are the heads under which the questions should be asked?
• What is the type of answer expected (either multiple choice type or descriptive)

As TPM has a greatest effect in the function of ACC Ltd., more questions were framed based on TPM. And also the employees in ACC Ltd. felt that the training given to them is different from their present work. So, some questions were framed based on training also. And, some questions were framed based on their personal background and provision of safety equipment to them. Firstly, the personal details of the employee like name, age, position, income should be there in first page of the questionnaire

Then a set of general questions were framed based on their training details, and these questions are simply to know about the training details of the employee, for the purpose of the management.

Then, the set of questions for evaluating the employees was framed and credits were given to questions based on the level of importance of each question in counselling the employee. The frame-up of questionnaire and reasons for allocation of credits for each question are explained below:

And, the weightage for the four options are:

Not at all — zero (0) points
Little — two (2) points
Sufficiently — four (4) points
To large extent — five (5) points

10.3. DATA COLLECTION THROUGH QUESTIONNAIRE

After carefully preparing the questionnaire, the management of Associated Cement Companies Ltd. was approached. And, the permission was granted to
interview the people of any department of the factory. The packing department of the factory was chosen to interview the people.

A sample of ten people at worker level was interviewed and the results of those interviews are provided here. This group of ten people has a distinct diversity in their age group and experience in the factory. Five loaders, two attenders, one head fitter, one shift in-charge and one mazdoor were interviewed based on the questionnaire.

10.3.1. Mode of Data Collection

As, many people do not have a good educational background, they won't be able to read the questionnaire and respond to it. So, they were interviewed based on the questions in the questionnaire and their responses were noted down. And, the collected data are shown in the Tables 10.1. (given in Annexure A). The results of the interviews should be kept confidential. So, the name of the employees are not given in the tables, instead their names are replaced by A, B, C, D, E, F, G, H, I, and J. But, the personal details are given in the table. The responses for all these questions are shown in the Table 10.2. (given in the Annexure A). And, the responses for the set of twenty questions for evaluating the employees are also given in the table.

10.4. DATA ANALYSIS

After the collection of data by noting down the responses of the employees, it is essential to analyse the collected data. The analysis should be in such a manner that a thorough study of responses can be done. There are so many modes to analyse data. But, to analyse the statistical data, charts are the most suitable ones.
In order to compare the data, charts are used, usually. And, there are so many types of charts namely, bar charts, line charts, pie charts etc. Among these charts, pie charts are much feasible to compare data simultaneously.

As the responses are collected from a sample of ten members, it is essential to check how many people have answered similarly. So, percentage of people with similar answers is to be calculated and shown in the diagramatic form for verification. By analysing in such a manner, it is possible to get an idea on the maximum number of people responding the same. By knowing about the majority responses, it is possible to know about the general answer from the employees’ side.

10.4.1. Pie-charts for response analysis

Pie-charts are drawn for each and every question with reference to the similarity in the responses of ten employees. And, those pie charts show the percentage of the population responding similar among a sample population of ten. And, those pie charts (for all the questions) are shown in Figures 10.0.

10.4.2. Visual Basic Outputs

The visual basic screens for an employee named 'B' is taken as the example and shown in the figures 10.0.1.
10.0. FIGURES : PIE-CHARTS

1. How much you feel the training program was useful to you?

2. Are you supplied with sufficient training materials?
3. How much were you able to gain knowledge by undergoing training?

- a - Not at all
- b - Little
- c - Sufficiently
- d - To large extent

4. Does the training given to you deal about maintenance?

- a - Not at all
- b - Little
- c - Sufficiently
- d - To large extent

5. Are the TPM concepts and strategies covered during your training period?

- a - Not at all
- b - Little
- c - Sufficiently
- d - To large extent
6. Are you able to understand the importance of TPM in the industry?

- 80%: □ c - Sufficiently
- 20%: □ d - To large extent
- 0%: ■ a - Not at all
- 0%: ■ b - Little

7. To what extent you were able to come out with your problems?

- 30%: □ c - Sufficiently
- 30%: □ d - To large extent
- 40%: ■ b - Little
- 0%: ■ a - Not at all

8. Are the gate meetings helpful in expressing the salient points of TPM?

- 40%: □ c - Sufficiently
- 20%: □ d - To large extent
- 10%: □ b - Little
- 30%: ■ a - Not at all
9. Is the training helpful in day to day work?

10. To what extent TPM has improved your involvement in your job?

11. Do you feel that your ideas are considered by the surroundings?
12. Are you provided with essential work materials when required?

- 10% Not at all
- 30% Little
- 60% Sufficiently
- 0% To large extent

13. Have you been provided with personal safety equipments in your work place?

- 20% Not at all
- 10% Little
- 40% Sufficiently
- 30% To large extent

14. To what extent does TPM increased the maintenance of machinery you are working?

- 40% Not at all
- 60% Little
- 0% Sufficiently
- 0% To large extent
15. Do you feel that TPM has led to better coordination between the employees and the management?

![Pie chart showing 60% Not at all, 30% Sufficiently, and 10% To large extent]

16. Do you think that TPM is helpful in increasing production?

![Pie chart showing 90% Not at all, 10% Little, and 0% Sufficiently or To large extent]

17. To what extent does the quality circles helpful in discussing about the essential points of TPM?

![Pie chart showing 90% Not at all, 10% Little, and 0% Sufficiently or To large extent]
18. To what extent you have shown interest and involvement towards the implementation and improvement in the process of TPM?

- a-Not at all
- b-Little
- c-Sufficiently
- d-To large extent

19. Do you feel that small group activities organised would help in enhancing the relationship between employees and the management?

- a-Not at all
- b-Little
- c-Sufficiently
- d-To large extent

20. Does the TPM activities performed increases the interest of employees towards the job?

- a-Not at all
- b-Little
- c-Sufficiently
- d-To large extent
10.5. FEEDBACK AND RESULTS

10.5.1 Feedback Regarding Counselling

Feedback is based on the option that the employee chooses for each question. There are four choices available for all the questions.

a) Not at all  
   b) Little

   c) Sufficiently  
   d) To large extent

If the employee chooses either of the first two options (a) and (b), feedback is made available according to the VISUAL BASIC code. And, if he chooses either of the next two options (c) and (d), there would not be any feedback for that particular question. If and only if a person has scored below 80%, feedback would be available for the questions, for which he has clicked either of the first two options. If he is above 80%, he would not get any feedback, even though he has clicked (a) and (b) for some of the questions, because as he has scored above 80%, he does not require counselling at all.

If a person makes all the responses either (a) or (b), he will get totally 20 feedbacks from the 20 questions. That case is taken as an example and the corresponding feedback is shown here.

10.5.2 Feedback – example

The feedback that would be given for the above example and the general procedure to carry out the total activity shown in the flowchart 10.1.
Development of questionnaire based on the quality drivers

Allocation of credits for each question

Allocation of points for each option for each question

Calculation of total points by cumulating the points of each question

Division of total points by the total number of credits
Provision for feedback on what heads and types of the counselling has to be done

Figure 10.1
10.5.3. Results

As a sample of ten people were interviewed and the results obtained by executing the visual basic program are as follows:

<table>
<thead>
<tr>
<th>Name</th>
<th>Score (in %)</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>84.8</td>
<td>He does not need counselling</td>
</tr>
<tr>
<td>B</td>
<td>73.2</td>
<td>He needs counselling</td>
</tr>
<tr>
<td>C</td>
<td>62.2</td>
<td>He needs counselling</td>
</tr>
<tr>
<td>D</td>
<td>82.4</td>
<td>He does not need counselling</td>
</tr>
<tr>
<td>E</td>
<td>81.2</td>
<td>He does not need counselling</td>
</tr>
<tr>
<td>F</td>
<td>86.4</td>
<td>He does not need counselling</td>
</tr>
<tr>
<td>G</td>
<td>89.2</td>
<td>He does not need counselling</td>
</tr>
<tr>
<td>H</td>
<td>85.2</td>
<td>He does not need counselling</td>
</tr>
<tr>
<td>I</td>
<td>91.6</td>
<td>He does not need counselling</td>
</tr>
<tr>
<td>J</td>
<td>72.8</td>
<td>He needs counselling</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NAME</th>
<th>FEEDBACK</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>He may be parallelly counselled on the problems he has and possible solutions for his problems can be provided. He can be indirectly counselled to make him understand that gate meetings are helpful for the success of TPM. Before providing training, he has to be vertically counselled whether he needs that training or not. He can be indirectly counselled regarding TPM's ability to create a good relation between employees and management.</td>
</tr>
<tr>
<td>C</td>
<td>He may be parallelly counselled on the problems he has and possible solutions for his problems can be provided. He can be indirectly counselled to make him understand that gate meetings are helpful for the success of TPM. Before providing training, he has to be vertically counselled whether he needs that training or not. Counselling should be done formally in such a way that he feels about about the benefits of TPM. He can be vertically counselled to express his points during SGAs so that his ideas would be considered. He has to be informally counselled regarding what are the safety equipment’s he requires during his job. He can be parallelly counselled regarding how SGAs give good relationship between employees and management.</td>
</tr>
<tr>
<td>J</td>
<td>He has to be vertically counselled regarding the concepts and principles of TPM. He may be parallelly counselled on the problems he has and possible solutions for his problems can be provided. Before providing training, he has to be vertically counselled whether he needs that training or not. He can be vertically counselled to express his points during SGAs so that his ideas would be considered.</td>
</tr>
</tbody>
</table>
FIGURES 10.0.1. VISUAL BASIC SCREEN OUTPUTS

FEEDBACK FOR IDEAL CASE

- He should be formally counselled periodically regarding the type of training he needs for his job.
- He should be counselled regularly regarding where the materials he needs.
- He should be counselled periodically regarding his work performance and he has to be trained.
- He should be counselled periodically regarding the maintenance activities he has to be trained.
- He should be counselled regarding the basic principles of TPM.
- He should be counselled regarding the importance of TPM in industry.
- He should be counselled on the problems he has and possible solutions for these problems can be provided.
- He should be counselled to make him understand the concept of TPM meetings and help him to the success of TPM.
- He should be counselled to express his positive attitude towards TPM training and not to reconsider his attitude.
- He should be counselled to express his willingness to learn about the materials he needs for his job.
- He should be counselled to express his willingness to learn about the materials he needs for his job.
- He should be counselled regarding the “monument principle”.
- He should be counselled regarding the ability to create a good relation between employees and management.
- He should be counselled regarding how TPM helps in increasing production by giving examples of other industries.
- He should be counselled about TPM activities in the department through direct counselling.
- He should be counselled regarding how TPM activities will show interest towards TPM.
- He should be counselled regarding how TPM activities will show interest towards TPM.
- He should be counselled regarding how TPM activities will show interest towards TPM.
<table>
<thead>
<tr>
<th>Details</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of the employee</td>
<td>Name of the employee</td>
</tr>
<tr>
<td>Age</td>
<td>Age</td>
</tr>
<tr>
<td>Sex</td>
<td>Sex</td>
</tr>
<tr>
<td>Marital status</td>
<td>Marital status</td>
</tr>
<tr>
<td>Position in ABC Ltd</td>
<td>Position in ABC Ltd</td>
</tr>
<tr>
<td>Department/Division</td>
<td>Department/Division</td>
</tr>
<tr>
<td>Educational Details</td>
<td>Educational Details</td>
</tr>
<tr>
<td>Experience in ABC Ltd</td>
<td>Experience in ABC Ltd</td>
</tr>
<tr>
<td>Monthly Income</td>
<td>Monthly Income</td>
</tr>
</tbody>
</table>
FEEDBACK FOR EMPLOYEE B

Henry has partially solved the problem he has and possibly solutions for his problem can be provided. He can be directly consulted to make him understand that good meetings are helpful for the success of TPL. Before providing training, he should be consulted to estimate whether he needs the training or not. He can be indirectly consulted regarding TPL's ability to create good relations between employees and management.
10.6. CONCLUSION

This chapter on Maintenance Quality Counselling serves a lot in increasing the quality of the industries, which depend mostly on the employee counselling as a maintenance quality strategy. Whenever the employee counselling has to be analysed, this would serve the purpose very effectively. The visual basic program would serve the counselling committee in doing the analysis part of the whole counselling program easily. The management of ACC Ltd readily accepted the practical implementation of Maintenance Quality Counselling. But due to some administrative reasons, they were unable to implement it immediately. They accepted this as a means to improve the maintenance quality. The results and the suggestions after the analysis of the data are submitted to the management for practical implementation. For the industries, where employee counselling is to be done for the purpose of improving maintenance quality, they can adopt the steps followed in this chapter and can make out the counselling programme successfully, which forms a strategy of SMQE model.