CHAPTER 3: RESEARCH METHODOLOGY

3.1 Selection of Measures

The successfulness of the new system implementation was measured with the users' satisfaction about the system output quality. It was gauged via questionnaires that had been distributed to the potential users of departments that frequently access to the new system. The user satisfaction is measured via Likert scale for the following measurement parameters: the output information's preciseness, accuracy, reliability, relevancy, content, format, sufficiency, timeliness, up-to-date; system features such as user friendly, ease of use, flexibility, system breakdown frequency; and effect on user job efficiency. At the same time, the questionnaires also gauge respondent evaluation of other supporting factors such as top management support, user participation, project management, user understanding, user training, IS members' understanding about users' job requirement, IS members support, availability of hardware and software facilities. The data is required in order to facilitate data interpretation and analysis. Besides that, qualitative data also obtained by interviewing the project team sub-leaders, who are the main runners of the project. The results of the questionnaires were reviewed with them. Based on the results, a reflection on the entire process of the project right from initial planning, feasibility study, requirement specification design until actual implementation, difficulties and problems encountered, experiences and lessons gained from the project implementation have been carried out in order to identify the success factors.

3.2   Sampling Design

The users of the system output are targeted in gauging the effectiveness of the system. The related departments of the company that utilize the system output in their daily operations are Engineering, Quality Control, Production and Planning Department. Main users are the executive staffs such as officers, engineers, assistant managers, managers and senior managers who has to trace and monitor the production and quality performance closely. The total potential users of the system in departmental basis is as follow:

Engineering Department : 51

Production Department : 16

Quality Control Department : 15

Planning Department : 14

Total : 96

In view of the small population size, questionnaires have been circulated to all the potential users.

3.3   Data Collection Procedures

3.3.1 Data Collection via Questionnaires

The data collection is conducted in 4 sessions in departmental basis. Data was collected in 4 days within a week, one session per day. The executive level staffs of each department were gathered in a meeting room after office hour. The questionnaires were distributed to them. The purpose of the study and meaning of all the evaluation parameters were explained clearly to all the respondents. The respondents were assured that all their reply will be kept confidential. Total of 32 executives attended the data collection sessions. The reason given by the absentees are busy with process work during the time, they do not want to stay back after office hour and some are not interested in this survey. In order to facilitate data collection especially from respondents who are busy and do not want to stay back after office hour, the questionnaires were then circulated to all the absentees for them to fill in according to their own sweet time. One week later, additional 34 sets of data were obtained. This has made up the total response rate of 66/96 (69%).

3.3.2 Data Collection via Interview

After collecting the data from the system users, an interview has been conducted with the 2 sub-leaders of the project. They are the key men who run the project. They have shared their experience of running the first company wide information system project in the company. They were also asked to give their comments on the results obtained through the questionnaires. They have brought along some minutes, data, reports regarding the project right from the team formation until the implementation of the system to justify their information during the review.

3.4   Data Analysis Techniques

The overall user satisfaction of every parameters collected through the questionnaires are summarized. Then the difference of user satisfaction among departments and among project and non-project members are analyzed with One-Way ANOVA and mean comparison. The results were then co-related to the information obtained via the project review with the project sub-leaders.