

The studies indicated that probably the critical factor in improving future research into team development is agreement on definition of the intervention programme with standard activities. This matter should be looked into in great details by future researchers.

Locally, there has been a dearth of research in this area. Most of the efforts conducted on teamwork were private in nature. Firms that practised teambuilding do it for organisational benefits where private consultants are usually engaged. Academic research on team building is new.

CHAPTER III

RESEARCH METHODOLOGY

This chapter outlines the methodology employed for the study. It includes discussion on the selection of measures, research instruments, sampling design, data collection procedures and the statistical techniques used to analyse the research data.

The Selection of Measures

The areas of interest in this study include the measurement of ‘Team Performance Rating’ as perceived by members of the team, the effectiveness of the team-awareness program known as ‘Team Dynamics’, and the assessment on group effectiveness and interpersonal processes.

Team Performance Rating

Section A of the survey measures ‘Team Performance Rating’. ‘Team Performance Rating’ is a model administered by Blanchard (1992) to measure the

organisation as well as to themselves. Awareness on the importance of teams are also gauged and the difference in the office atmosphere with regards to team before and after the programme was also asked.

At the end of the Section, respondents were asked on what they think are the advantages and disadvantages of the programme using open-ended questions. Respondents were also given the opportunity to suggest improvements to the programme. The author discussed the final draft with the supervisor, Ms. Ong Fon Sim, before the questions on this section were printed. The reliability of the questions in providing the answer for the effectiveness was tested using Cronbach -Alpha Algorithm (Nunally 1978).

Similar to Section A, respondents were asked to respond to each questionnaire on the scale of 1 to 5, where '1' would correspond to 'strongly disagree', '2' to 'disagree', '3' to 'neutral', '4' to 'agree' and '5' to 'strongly agree'

Assessing Group Effectiveness and Interpersonal Processes.

Section C consists of 2 parts. Part 1 was intended to assess the 'Group Effectiveness' and Part 2 was to assess 'Interpersonal Process'. The questions in this Section were taken from works by researcher Peter Moxon (Grower, Aldreshot 1993).

The elements in Part 1 of this Section are to be assessed as development strategies for team performance. Respondents were asked to select a value he thinks fit in a semantic differential scale from 1 to 7. On this scale, the two extreme value of the element are placed at the two extreme ends. For example, for 'Communication Ability, '1' would present 'Guarded, cautious' while '7' would present 'Open, honest'.

There are altogether 9 elements and these elements are as shown in Section C of Appendix 1 (Survey form).

Part 2 of this Section examines ‘Interpersonal Processes’ in a team. There are 5 areas which address interpersonal relationship. The 5 areas are :

- *Listening*
- *Supporting*
- *Consensus*
- *Participation*
- *Function of teams*

Respondents were asked to respond to each question on the scale of 1 to 5, where ‘1’ corresponds to ‘not at all’, ‘2’ to ‘To a small extent’, ‘3’ to ‘Moderate extent’, ‘4’ to ‘Great extent’ and ‘5’ to ‘Very great extent’.

RESEARCH INSTRUMENT

A nine-paged questionnaire (Appendix 1) which was refined was used as the research instruments in this study.

The questionnaire had 4 Sections namely:

- **Section A** - Team Performance Rating
- **Section B** - Effectiveness of the Team Dynamics Programme
- **Section C**- Assessing Group Effectiveness and Interpersonal Process
- **Section D** - Personal Details of Respondents.

Table 1 indicates the number of survey sets distributed randomly among the Departments/ Unit of the Transmission Division and number of survey sets returned for this study. The questionnaire was distributed only to the executives as the 'Team Dynamics' programme was first implemented among the executives.

Out of the total 133 sets of questionnaire distributed, (that is approximately 65 % of the total number of executives in Transmission Division); 89 were returned (66.9%). Five of the returned sets (2.3%) were incomplete and thus omitted. Therefore, the analysis in this study were performed based on 84 respondents (63.2% of the total number distributed).

Distribution breakdown by Departments is as shown in Table 1, where executives of Transmission Maintenance returned 70.4% of the survey forms distributed, followed by Transmission Operation at 70.2%. Poor returns were recorded from Transmission Projects and BMU, whereby the returns recorded were 55% and 40% respectively.

Overall the return rate of questionnaires was considered poor despite the author's effort of appointing representatives at different offices and enclosing self-addressed envelopes. Despite the convenience of internal postal despatch, the Headquarters respondents were hesitant to respond. This in a way contributed to the limitation of the study undertaken

TABLE 1

DISTRIBUTION AND RETURN OF QUESTIONNAIRES

DEPARTMENTS/UNITS	NUMBER OF EXECUTIVES	NO.OF SURVEY	NO.OF SURVEY
		DISTR ^D	FORMS RETURNED
TRANSMISSION MAINTENANCE	68	44	31 (36.9%)
TRANSMISSION PROJECT	64	42	23 (27.5%)
TRANSMISSION OPERATION	57	37	26 (30.9%)
BUSINESS MANAGEMENT UNIT (BMU).	16	10	4 (4.7%)
<i>TOTAL</i>	205	133	84 (100%)

SAMPLE DESIGN

The survey was conducted in the Transmission Division Offices around the country. There were 13 offices altogether; 11 of which were in Kuala Lumpur and Petaling Jaya. The survey forms were also distributed by post to the 8 regional branches of Transmission Maintenance in the north and south of Peninsular Malaysia.

Respondents were comprised of executives of different grades who have attended the 'Team Dynamics' programme between March and November 1995. Care was taken to ensure that the sample consisted of a heterogeneous group of Malay,

Chinese, Indians and other executives, in terms of their service duration with Tenaga, income, age, marital status, sex and present designation.

DATA COLLECTION PROCEDURE

The survey method of data collection was adopted. Four Departmental representatives were appointed to assist distribution and collection of survey forms in the Klang Valley. Representatives were briefed on ways to fill up the survey forms. For distribution purposes, the representatives were given a number of forms in proportion to the number of executives in their respective Departments/ Unit (Please refer to summary of the survey forms distributions is as in Table 1). Specific instruction were given to the representatives prior to the distribution of the forms. They were requested to distribute the forms randomly to executives who had participated in the ‘Team Dynamics’ programme. Although self-addressed envelope was attached with each form, the representatives were also asked to assist in the collection of the survey forms. Data collection was done over two weeks period, at the end of November and beginning of December 1995.

DATA ANALYSIS TECHNIQUE

Statistical analysis of the data from the survey was accomplished by using the Statistical Package for Social Science Programme (SPSS/PC+). Discussion on analysis is divided into four sections in this report.

The first part of the analysis provides a summary of demographic characteristics of respondents.

The second part of the analysis describes the use of mean and standard deviation in determining the level of response to each individual questions, and to the 7 dimensions as in the case of the 'Team Performance Rating'.

The third part of the analysis describes the difference in opinion and responses of respondents of different managerial level, age and functions among the respondents.

The fourth part of the analysis describes the use of Cronbach-alpha analysis in determining reliability of the various constructs.

Team Performance Rating

In case of Section A, mean score and standard deviation for all of the 28 questions and later the 7 dimensions were computed in order to summarise the level of agreement / disagreement.

The data was then regrouped back into 7 groups to represent the 7 dimensions. Once again, the mean and standard deviation for each of the dimension were

determined in order to summarise the level of agreement / disagreement on the individual dimension.

The data was then collapsed and reorganised as to determine the response for each of the question and for each of the dimension of 'Team Performance Rating' according to Managerial Level, by Age and by Functions.

In the case of managerial levels, the respondents' 5 level of job designations was collapsed to 2 levels, vis. a. vis. the Executives level consisting of Junior Executives, Executives and Senior Executives; and the Managers level consisting of Managers, Senior Managers and Assistant General Managers and above.

In the case of 'Team Performance Rating' by Age, the respondents were regrouped into 3 main groups, namely the '25 to 30 years' (junior) group, the '31 to 35 years' (intermediate) group and the '35 and above' (senior) group. The grouping by functions were performed according to the respondents' Departments. In this instance, respondents from sub-units of a particular Department were regrouped under the parent Department. For example, Transmission Maintenance (North) was regrouped under Transmission Maintenance.

The regrouped Departments were :-

1. *Transmission Maintenance*
2. *Transmission Project*
3. *Transmission Operation*
4. *Business Management Unit.*

In the case of 'Performance Rating' by managerial level, mean score by the 2 levels on each individual questions as well as on the 7 dimensions were recorded.

Student t-test was performed on the two levels to determine significance difference between the levels. Cut -off level of 0.050 was used to determine the significant difference between the 2 levels.

A one way variance analysis (ANOVA) was performed on 'Team Performance Rating' by Age and by Functions. In cases where the F - Probability came down below significant level of 0.050, the difference between 2 or more groups of the respondents would be highlighted.

Effectiveness of the 'Team Dynamics' Programme

Mean score and standard deviation for all the 19 questions in Section B were computed in order to summarise the level of agreement or disagreement . As in Section A, the data was then collapsed and reorganised as to determine the response to the effectiveness of the 'Team Dynamics Programme' by Managerial Level, by Age and by Functions. In the case of Managerial Levels, the respondents' 5 level of job designations was again collapsed to 2 level as in Section A. Similarly, in the case of Age, the respondents were regrouped into the 3 main groups. The grouping by functions were also performed according to the respondents' Departments.

In the case of 'Effectiveness of the 'Team Dynamics' programme' by managerial level, mean score by the 2 levels on individual questionnaires were recorded. Student t-test was performed on the two levels and the significance difference between the two levels was recorded. Cut -off level of 0.050 (95%) was used to determine significant differences between the 2 executive levels.

A one way variance analysis (ANOVA) was performed on 'Effectiveness of the 'Team Dynamics' programme' by Age and by Functions. In cases where the F - Probability came down below significant level of 0.050 , the differences between 2 or more groups of the respondents were to be highlighted.

Assessing Group Effectiveness and Interpersonal Relation.

As in Section A and B, mean score and standard deviation for all of the 9 elements in Part 1 and 5 questions in Part 2 were recorded and tabulate to summarise the level of agreement or disagreement.

The data was then collapsed and reorganised to determine the response of 'Group Effectiveness' and 'Interpersonal Processes ' by managerial level, by age and by functions.

In the case of 'Group effectiveness and 'interpersonal processes' by managerial level, mean score by the 2 levels on individual question were recorded. Student t-test was performed on the two levels and the outcome for significance difference was recorded. Cut -off level of 0.050 was used to determine significant differences between the 2 groups.

A one way variance analysis (ANOVA) was performed on 'Group Effectiveness' and 'Interpersonal processes'. Mean score and standard deviation for all the 9 elements for Part 1 and 5 questions for Part 2 were computed in order to summarise the level of responses. As in Section A, the data was then collapsed and reorganised as to determine the response of 'Group Effectiveness' and 'Interpersonal processes' by managerial level, by age and by functions.

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In the case of managerial levels, the respondents 5 level of job designations was again collapsed to 2 level as in Section A. Similarly, in the case of Age, the respondents were regrouped into the 3 main groups. The grouping by functions were also performed according to the respondents' Departments.

In the case of 'Group Effectiveness' and 'Interpersonal processes' by managerial level, mean score by the 2 levels on individual questions were recorded. Student t-test was performed on the two levels and the significance difference level was determined. Cut -off level of 0.050 (95 %) was used to determine significant differences between the 2 groups.

A one way variance analysis (ANOVA) was performed on of 'Group Effectiveness' and 'Interpersonal processes' by Age and by Functions. In cases where the F - Probability came down below significant level of 0.050, the difference between 2 or more groups of the respondents are highlighted.

Reliability Tests

Reliability tests were performed on the questions in Section A, B and C to test reliability contribution of the questions to the constructs. This was done by using Cronbach-alpha algorithm within the SPSS/PC+ programme. This test was particularly important to Section B where the questions were designed by the author together with the supervisor.