CHAPTER III
METHOD OF THE STUDY

The aim of the present investigation was to examine the effects Organizational Climate of Secondary Schools of Thailand in relation to Institution Types, Leadership Behaviour, and Job Satisfaction among Teachers.

This chapter deals with the methodology of the study. It is divided into six parts as follows:

3.1 Tools
3.2 Sample
3.3 Design of the study
3.4 Data collection and scoring
3.5 Statistical Techniques
3.6 Analysis of Data
3.7 Levels of Significance

3.1 Tools

The followings are the tools used for collecting data:

- **School Climate Survey**: Developed and standardized by the National Association of Secondary School Principals, Task Force on Effective School Climate (1984)
- **The Teacher Satisfaction Survey**: Developed by Schmitt and Loher (1987)
- **Leadership Style Questionnaire**: Developed by Kapur (1995)

3.1.1 School Climate Survey:

It is developed and standardized by the National Association of Secondary School Principals, Task Force on Effective school climate (1984), at the University of Nebraska-Lincoln. This tool, the comprehensive assessment of the school environment, has been widely used in research works by Hamilton (1989), McLeod (1989), Chittom (1990), Meissen (1991), Pluangnuch (1995) and Preedasak (1997). This scale measures the perception of teachers about the physical, social and
learning environment of the schools. It consists of 55 items covering the following 10 dimensions, namely:

Teacher-Student Relationship is the perception about the quality of the interpersonal relationship between teachers and students. The dimension is composed of 12 items.

Security and Maintenance is the perception about the quality of maintenance and the degree of security people feel at the school. The dimension is composed of 7 items.

Administration is the perception of the degree to which school administrators are effective in communicating with different role groups and in setting high performance expectation for teachers and students. The dimension is composed of 6 items.

Student Academic Orientation is the perception about student attention to task and concern for achievement at school. The dimension consists of 4 items.

Student Behavioral Values is the perception about student self-discipline and tolerance for others. The dimension is composed of 3 items.

Guidance is the perception about the quality of academic and career guidance and personal counseling services available to students. The dimension is composed of 4 items.

Student-Peer Relationship is the perception about students’ care and respect for one another and their mutual cooperation. The dimension comprises 4 items.

Parent and Community-School Relationship is the perception of the amount and quality of involvement in the school of parents and other community members. The Dimension is composed of 4 items.

Instructional Management is the perception of the efficiency and effectiveness of teacher classroom organization and use of classroom time. The dimension is composed of 7 items.

Student Activities is the perception about opportunities for and actual participation of students in school sponsored activities. The dimension consists of 4 items.
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Scale of Organizational climate is assigned the scores as follows:

- Strongly agree = 4
- Agree = 3
- Disagree = 2
- Strongly disagree = 1

The criteria of the interpretation of mean scores in dimension and total organizational climate are as follows:

3.51-4.00 is very favourable
2.51-3.50 is favourable
1.51-2.50 is unfavourable
1.00-1.50 is very unfavourable

For this scale, internal consistency coefficients (Cronbach’s alpha) are calculated in normative studies from more than 1,500 teacher respondents (NASSP., 1988), reliability is 0.81, and reliability of dimension is 0.87 of Teacher-Student relationship dimension, 0.85 of Security and Maintenance dimension, and Administration dimension, 0.83 of Student Academic Orientation dimension, 0.73 of Student Behavioral Values dimension, 0.84 of Guidance dimension, 0.80 of Student-Peer Relationship dimension, 0.79 of Parent and Community-School Relationship dimension, Instructional Management dimension, and Student Activities dimension.

This instrument was translated into Thai language in order to administer to the teachers. Help was taken from experts in Thai language to see that translation was authentic and conveyed the real meaning of the original statement. Try out of this instrument was computed with 40 teachers in the private General Education Schools (Preedasak, 1997). The reliability of this is 0.92, and reliability coefficients of Dimensions are: 0.79 of Teacher-Student Relationship dimension, 0.82 of Security and Maintenance dimension, 0.89 of Administration dimension, 0.79 of Student Academic Orientation dimension, 0.49 of Student Behavioral Values dimension, 0.86 of
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Guidance dimension, 0.83 of Student-Peer Relationship dimension, 0.74 of Parent and Community School Relationship dimension, 0.83 of Instructional Management dimension and 0.80 of Student Activities dimension.

This scale was tried out by the investigator on 30 teachers in secondary schools of Thailand. The reliability coefficients of dimensions were: 0.83 of Teacher-Student Relationship dimension, 0.80 of Security and Maintenance dimension, 0.81 of Administration dimension, 0.85 of Student Academic Orientation dimension, 0.40 of Student Behavioral Values, 0.91 of Guidance dimension, 0.72 of Student-Peer Relationship dimension, 0.83 of Parent and Community-School Relationship dimension, 0.65 of Instructional Management dimension, and 0.82 of Student Activities dimension.

3.1.2 The Teacher Satisfaction Survey:

It has been developed by Schmitt and Loher (1987) at Michigan State University, is standardized for use with teachers. This scale measures the personal, affective response of the teachers to a specific situation or condition. It consists of 47 items covering the sub-scales as follows:

Administration measures the teacher reaction to administrator behaviour of concern, support, feedback, supervision, and praise for teachers’ effort. The sub-scale is composed of 7 items.

Compensation exhibits the teacher satisfaction with salary, fringe benefit and job financial security. The sub-scale is composed of 4 items.

Opportunity of Advancement reveals teacher satisfaction with opportunity for career advancement through promotion or professional development for new career roles. The sub-scale is composed of 3 items.

Student Responsibility and Discipline measure teacher satisfaction with student conduct and disciplinary practice in the school. The sub-scale is composed of 4 items.
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Curriculum and Job-Task denote teacher satisfaction with the school program and teacher workload. The sub-scale is composed of 6 items.

Co-worker exhibits teacher satisfaction with the personal and professional characteristics and behaviour of colleagues. The sub-scale is composed of 6 items.

Parent and Community denote the teacher satisfaction with the levels of involvement and support provided by parents and community members. The sub-scale is composed of 5 items.

School Building, Supplies, and Maintenance denote the teacher satisfaction with the quality and availability of supplies and with the adequacy and maintenance of the buildings and grounds. The sub-scale is composed of 6 items.

Communication measures the satisfaction with the accuracy and availability of information about important school and district events. The sub-scale is composed of 6 items.

Scale of Job Satisfaction is given the scores as follows:
- Very satisfied = 4
- Satisfied = 3
- Dissatisfied = 2
- Very dissatisfied = 1

For the instrument, internal consistency coefficients (Cronbach’s alpha) have been calculated in normative studies from more than 1,500 teacher respondents (NASSP., 1988), the instrument reliability is 0.88, and reliability of sub-scales is 0.92 of Administration sub-scale, 0.87 of Compensation sub-scale, 0.93 of Opportunity of Advancement sub-scale, 0.89 of Student Responsibility and Discipline sub-scale, 0.80 of Curriculum and Job-task sub-scale, 0.89 of Co-worker sub-scale, 0.88 of Parent and Community sub-scale, 0.85 of School Buildings, and Supplies and Maintenance subscale, and 0.87 of Communication sub-scale.

The instrument was translated into Thai language in order to administer to the teachers. Help was taken from experts in Thai
language to see that translation was authentic and conveyed the real meaning of the original statement, and this instrument was tried out on 40 teachers in private General Education Schools (Preedasak, 1997). The reported reliability is 0.95. The reliability of sub-scales is 0.90 of Administration sub-scale, 0.80 of Compensation sub-scale, 0.83 of Opportunity of Advancement sub-scale, 0.76 of Student Responsibility and Discipline sub-scale, 0.78 of Curriculum and Job-task sub-scale, 0.81 of Co-worker sub-scale, 0.87 of Parent Community sub-scale, 0.82 of School Buildings, Supplies and Maintenance sub-scale, and 0.89 of Communication sub-scale.

The scale was tried out by the investigator on 30 teachers in secondary schools of Thailand. The reliability coefficients of sub-scales were: 0.84 of Administration sub-scale, 0.72 of Compensation sub-scale, 0.76 of Opportunity of Advancement sub-scale, 0.83 of Student Responsibility and Discipline sub-scale, 0.73 of Curriculum and Job-task subscale, 0.75 of Co-worker sub-scale, 0.87 of Parent and Community sub-scale, 0.86 of School Buildings, Supplies and Maintenance sub-scale, and 0.84 of Communication sub-scale.

3.1.3 Leadership Style Questionnaire:

It has been developed by Kapur (1995), which is used to measure three components of leadership style: initiating structure (15 items), consideration (15 items), and charisma (18 items). The teachers are asked to rate the behaviour of the principal on a five-point scale with 1 representing “never” and 5 representing “always”. The sum of the item responses relating to each sub-scale provides the scores for each of the components of leadership. The sub-scales measuring initiating structure and consideration are adapted from the Leader Behaviour Description Questionnaire (LBDG) which was developed at Ohio State University (Halpin, 1966). The established Cronbach’s alpha reliabilities of these two sub-scales are 0.81 and 0.84, and evidence of concurrent criterion validity has been provided by Halpin (1966). The sub-scale for measuring charisma is adapted from one of Bass’s (1985) scales of transformational leadership and its estimated Cronbach’s alpha
reliability is 0.95. And also, its construct validity is established well in Bass’s (1985) report.

For Questionnaire of Leadership Style, the scores on positive items are assigned as follows:
- Always = 5
- Often = 4
- Occasionally = 3
- Seldom = 2
- Never = 1

and the scores of negative items are assigned as follows

- Always = 1
- Often = 2
- Occasionally = 3
- Seldom = 4
- Never = 5

In Kapur’s study (1995), the estimated Cronbach’ s alpha reliability coefficients for sub-scales - initiating structure, consideration and charisma are 0.83, 0.62 and 0.96 for the sample drawn from India and 0.85, 0.72 and 0.93 for the sample drawn from USA.

In this study, the questionnaire is translated into Thai language in order to administer the same to the teachers. Help was taken from experts in Thai language to see that translation was authentic and conveyed the real meaning of the original statement, and this instrument was tried out by the investigator on 30 teachers in secondary schools of Thailand. The reliability of sub-scales came out to be 0.87 of initiating structure, 0.91 of consideration and 0.94 of charisma.
3.2 Sample

In the present study, the sample was drawn from Government and Private secondary schools of Bangkok area of Thailand. The procedure of multi-stage sampling was followed for the present investigation.

In the first stage the list of school was prepared from northern, southern, eastern, western and central areas of Thailand. From each area four schools (2 Government and 2 Private) were randomly selected. Thus, this study was carried out on the basis of stratified random sampling technique. The stratification was done on the basis of the each directional area as well as the central area of Thailand. Also, it was done on selection of the basis of the Type of Institutions (Government and Private). Within these stratifications, the sample was randomly drawn with regard to the selection of schools and the number of teachers drawn from each school. The sample-pool structure is presented in Table 3.1 below:
Table 3.1
Sam The Structure

<table>
<thead>
<tr>
<th>No.</th>
<th>School Name</th>
<th>District Code</th>
<th>1050</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DONMUANG TAHARNARGARDBUMRUNG SCHOOL</td>
<td>52</td>
<td>21</td>
</tr>
<tr>
<td>2</td>
<td>TRIAM UDOM SUKSA SCHOOL</td>
<td>53</td>
<td>22</td>
</tr>
<tr>
<td>3</td>
<td>TEPLEEELA SCHOOL</td>
<td>52</td>
<td>23</td>
</tr>
<tr>
<td>4</td>
<td>TEPSIRIN SCHOOL</td>
<td>52</td>
<td>24</td>
</tr>
<tr>
<td>5</td>
<td>NAWAMINTHRACHINUTHIT TRIAMUDOMSUKSANOMKLAO SCHOOL</td>
<td>53</td>
<td>25</td>
</tr>
<tr>
<td>6</td>
<td>NAWAMINTHRACHINUTHIT BODINDECHA SCHOOL</td>
<td>53</td>
<td>26</td>
</tr>
<tr>
<td>7</td>
<td>BENJAMARACHALAI SCHOOL</td>
<td>52</td>
<td>27</td>
</tr>
<tr>
<td>8</td>
<td>SUNTIRAJ SCHOOL</td>
<td>52</td>
<td>28</td>
</tr>
<tr>
<td>9</td>
<td>WAT BENJAMABORPIT SCHOOL</td>
<td>52</td>
<td>29</td>
</tr>
<tr>
<td>10</td>
<td>RAJAVINIT MATAYOM SCHOOL</td>
<td>53</td>
<td>30</td>
</tr>
<tr>
<td>11</td>
<td>WAT BORVONNIVET SCHOOL</td>
<td>52</td>
<td>31</td>
</tr>
<tr>
<td>12</td>
<td>WAT RAJABOPIT SCHOOL</td>
<td>52</td>
<td>32</td>
</tr>
<tr>
<td>13</td>
<td>SUKSANART SCHOOL</td>
<td>53</td>
<td>33</td>
</tr>
<tr>
<td>14</td>
<td>SATRIWITHAYA SCHOOL</td>
<td>53</td>
<td>34</td>
</tr>
<tr>
<td>15</td>
<td>SUANKULARB WITTAYALAI SCHOOL</td>
<td>53</td>
<td>35</td>
</tr>
<tr>
<td>16</td>
<td>SAIPUNYA SCHOOL</td>
<td>53</td>
<td>36</td>
</tr>
<tr>
<td>17</td>
<td>SURASAKMONTREE SCHOOL</td>
<td>53</td>
<td>37</td>
</tr>
<tr>
<td>18</td>
<td>HORWANG SCHOOL</td>
<td>53</td>
<td>38</td>
</tr>
<tr>
<td>19</td>
<td>SRIYUDHYA SCHOOL</td>
<td>52</td>
<td>39</td>
</tr>
<tr>
<td>20</td>
<td>MAKKASANPITTAAYA SCHOOL</td>
<td>52</td>
<td>40</td>
</tr>
</tbody>
</table>

Total N = 1,050 + 1,050
= 2,100
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Table 3.1 shows that the total number of teachers drawn from 40 schools of both types was 2,100 (1,050 from Government schools and 1,050 from Private schools).

The structure of the sample at the first stage showed how the proportion of school population and samples were taken. There were 40 schools taken by Yamane’s formula of proportional allocation. It was decided on the basis of the formula:

\[ n = \frac{N}{1 + Ne^2} \]

- \( n \) = sample size
- \( N \) = size of population
- \( e \) = precision = 0.05 (Yamane, 1967)

In the second stage, the sampling was further done on the basis of Leadership Behaviour. Two groups of Leadership Behaviour consisted of high Leadership Behaviour and low Leadership Behaviour based on Kelley’s (1939) criterion of taking top 27% and bottom 27% cases for high and low groups respectively. Thus, four groups were formed based on the twin variables of Institution Types (Government and Private) and Leadership Behaviour (high and low within each Institutional Type). The number of teachers in all the four groups came out to be 1,136 (282 in each of the four conditions).

In the third stage, the sampling was further done on the basis of the variable of Job Satisfaction, for which again two groups (high Job Satisfaction group and low Job Satisfaction group) were formed, on the basis of Kelley’s consideration given above, from each of the four conditions. Thus, there were eight conditions, formed in different combinations of two level of each of the 3 variables of Institution Types, Leadership Behaviour, and Job Satisfaction. In each of the 8 conditions of 2x2x2 factorial design, the number of teachers was 75, thus making the total of 600 teachers for the application of ANOVA for analysis as per the requirements of the factorial design under reference.
3.3 Design of the Study

The present study is based on 2x2x2 factorial design. The independent variables are Institution Types, Leadership Behaviour and Job Satisfaction. The Organizational Climate of secondary schools and its dimensions are dependent variables.

The layout of the 2x2x2 factorial design is given below:

![Diagram of factorial design]

**Figure 3.1 Lay-out of the Factorial Design**

The treatment groups are: I₁L₁J₁, I₁L₂J₂, I₂L₁J₁, I₂L₂J₂, I₁L₁J₂, I₂L₂J₁, I₂L₂J₂

From the layout given above, it is clear that the factor of Institution Types is varied at two levels: Private Schools (I₁) and Government Schools (I₂). The factor of Leadership Behaviour is varied at two Levels: High-Leadership Behaviour (L₁) and Low-Leadership Behaviour (L₂). The factor of Job Satisfaction is also varied in two Levels: High-Job Satisfaction (J₁) and Low-Job Satisfaction (J₂).
The organizational climate and each of its dimensions are taken as dependent variables in each replication of ANOVA. The dimensions of the organizational climate are given below:

- Teacher-Student Relationship
- Security and Maintenance
- Administration
- Student Academic Orientation
- Student Behavioral Values
- Guidance
- Student-Peer Relationship
- Parent and Community-School Relationship
- Instructional Management
- Student Activities
- Total Organizational Climate

### 3.4 Data Collection & Scoring

For data collection four tools were administered which consisted of: 1) Personal data 2) Job Satisfaction Scale 3) Leadership Style Questionnaire and 4) Organizational Climate Scale. The tools were translated into Thai language. The questionnaires were mailed with the letter of Director of General Education Department to the teachers of secondary schools selected on the basis of stratified random sampling in July to September 2003. The investigator received the returned and completed 2,100 questionnaires in all respects.

Scoring was done by the investigator on the basis of the scoring procedure given under caption 3.1 of the present study for the variables of Organizational Climate, Leadership Behaviour and Job Satisfaction of Teachers. The scores for the Organizational Climate were computed separately for each of the following dimensions of the Organizational Climate:

- Teacher student Relationship (12 items)
- Security and Maintenance (7 items)
- Administration (7 items)
- Student Academic Orientation  
- Guidance  
- Student Peer Relationship  
- Parent and Community School Relationship  
- Instructional Management  
- Student Activities  

Also, the total score on Total Organizational Climate was found out by adding up the scores of all the 10 dimensions mentioned above. For the variables of Leadership Behaviour and Job Satisfaction the total scores were found out by summing up the scores of all the items contained in the questionnaires meant for the measurement of the variables under reference.

Only raw scores were taken into account for the analysis of data. Out of 2,100 questionnaires scored by the investigator only 600 cases were considered for the application of ANOVA, since other cases were weeded out as per the requirements of 2x2x2 factorial design. The procedure for this weeding out technique was based on Kelley’s (1939) consideration of taking up 27% top and 27% bottom cases for forming high and low groups on each variable of Leadership Behaviour and Job Satisfaction. This has been explained elaborately under caption 3.2 of the present study.

3.5 Statistical Techniques

After data collection and scoring suitable statistical techniques were used for the organization and analysis of data. All raw scores had to be systematized and organized for worthwhile purpose. These consisted of the checking-up of the gathered data for accuracy and the dividing of information into different categories for use.

The following statistical techniques were used to analyse the data:

1. Tabulation and frequency distribution
2. Measures of central tendency and standard deviation
3. Calculation of standard error of mean to find out the fluctuation of flexibility of each mean

4. Analysis of Variance. It was replicated 10 times by taking each dimension of Organizational Climate one by one as also the Total Organizational Climate as a dependent variable for each replication.

5. Inter-correlations among the variables for the total sample.

3.6 Analysis of Data

Descriptive statistics like means and deviation were employed to the sample and the variable of Organizational Climate and its dimensions.

Analysis of variance is one of the most powerful tools of statistical analysis. It enables one to analyse the total variation of one’s data into components which maybe attributed to various “sources” or “causes” of variation. According to Ferguson (1971), “the analysis of variance is a technique for dividing the variation observed in the data into different parts, each part assignable to a known source, cause, or factor. By this technique the relative magnitude of variation resulting from different sources may be assessed; and it may also be ascertained whether a particular part of variation is greater than expectation under the null hypothesis”. It is mostly used for the important and often encountered problems of determining the significance of the differences among several means. It is a composite test that gives an overall idea about the significance of the difference among several means. The main characteristic of this technique is that variance can be simultaneously analysed into components attributable to different factors. It can be used to find out the interaction effects of the factors under study.

In the analysis of data, the total sum of squares is broken up into between subjects and within subjects-components.

Analysis of variance gives global picture about the nature of variance. A significant “F” indicates that there are non-chance
variations among groups. The F-ratio cannot point out which one or how many means are significantly different.

Three-way analysis of variance (ANOVA) is calculated to test the different hypotheses in 2x2x2 factorial design, calculating of T-test is used if the F-ratio is showing significant difference. In the present study, three-way analysis of variance was computed for testing differences between Institution Types, Job Satisfaction and Teachers' Perception of Leadership Behaviour on each dimension of Organizational Climate as well as on the Total Organizational Climate of secondary schools.

Pearson's Product-Moment Coefficient was computed to examine the correlation among the variables of study.

The data thus, collected with the help of above-mentioned tools, were subjected to statistical analysis, to find out the nature and direction of variance. It has been discussed in details in the following chapter.

### 3.7 Levels of Significance

The customary levels of significance at 0.05 and 0.01 levels were adopted for testing the hypotheses of the study. A significant result at 0.05 level means that the chances are 5 out of 100 when the difference between means can result due to chance, if the treatment applied is having an effect. In case of the 0.01 level, it is only 1 out of 100 that the difference between means can be due to chance.

Chapter III gives a peep into the procedural part of the study in totality. The actual analysis of data, by using the statistical techniques referred to in this chapter, is presented in the next chapter.