Chapter - 4
CHAPTER - IV

PLANNING AND PROCEDURE

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CHAPTER – IV

PLANNING AND PROCEDURE

4.1 Introduction

The previous chapter contained a detailed account of the researches on organizational climate, Teacher Morale, and the principal characteristics & only relevant researches had been reviewed there. Apart from giving him an insight into the problem, it has also helped the investigator in planning the present problem.

Planning is a necessary step even for an ordinary casual work. And when the work is spread over a number of weeks and months, Planning must be at core if the work is to be completed without any confusion or disarray.

The present research is a multi-dimensional and has multiple phases. Hence every care and caution must be taken in preparing and executing the plan to arrive at definite and valid conclusions.

This study sets forth a major hypothesis that teacher morale is related to school climate and leadership behaviour of the principal. Two dimensions of organizational climate are posited as significant in this respect. These dimensions are "open" and "Closed" climates as delineated by Hoy and Apple Berry¹.
4.2 Phase of Research study and Their Variables

The study envisages four phases pertaining to three important variables of organizational climate, Leadership Behaviour and teacher morale in relation to pupils academic achievement.

1. The first phase of the study would emphasize the Organizational Climate Description Questionnaire (OCDQ) and its measures. The different behaviours of the principals and teachers with regard to "Open" and "Closed" climate Schools would be juxtaposed and interpretations would be drawn with the help of Analysis of Variance (ANOVA). Here, the dependent variable would be different characteristics of teachers and principal's scores obtained from the administration of the sub-tests of OCDQ.

2. The second phase of the study would stress the Leadership Behaviour Description Questionnaire (LBDQ) and its scores. The different dimensions of leader Behaviour would be juxtaposed in relation to "Open" and "Closed" climate schools and interpretation would be drawn with the help of ANOVA. Here the independent variable would be OCDQ operating at two levels of open and closed schools. The dependent variable would be LBDQ scores.

3. The third study would deal with scores of teacher morale which morale which would act as dependent variable.
While LBDQ variable would be independent variable operating at four levels.

4. The forth study would be a major study of the present problem where in various independent significant variables would be cast to form a factorial design in order to see how they influence the pupils academic achievement.

The first three phases of Research study identifying of Organizational Climate, Leadership Behaviour and Teacher Morale were strictly exploratory. If different sub-populations - teachers and principals of the sample perceived organizational climate and leadership behaviour in identical fashion there would be no point in going for the investigation as to how pupils achievement scores would spread.

4.3 Phase One: Organization Climate and OCDO

In a major study of sixty schools, Halpin and Croft identified and described eight basic characteristics of social interaction between the principal and the teachers, Four of the characteristics refer to Teacher Behaviour viz.

Disengagement, Hindrance, Esprit and Intimacy. The four describe Principal behaviour, viz. Aloofness, Production Emphasis, Thrust and Consideration. The behaviours describe by characteristic has been give in chapter II of this thesis.
In addition, Halpin and Croft conceptualized social interaction of professional personnel of schools in terms of more general factor "Openness" of a school refers to action which emerge freely and without constraints; i.e. the behaviour of the group members is genuine or authentic. The leadership acts are readily initiated from both the principal and the teachers and the group is not inordinately concerned with either task achievement or social needs of satisfaction on both counts emerges easily and almost effortlessly.

The concept of "Openness" in organizational behaviour seems highly compatible with teacher morale and their effectiveness, Hence the investigator was simply concerned with the types of organizational climate into "Open" and "Closed" climates.

The OCDQ is composed of 64 Likert-type items. By factor analysis of schools profiles, the authors identified general "Openness" factor. The openness score for school can be computed by summing the Esprit and Thrust (3+7) and then subtracting the Disengagement (1) scores:

"Openness" = Esprit + Thrust - Disengagement

= 3 + 7 - 1

Thus the investigator tried to use this method suggested by Halpin and Croft used by Hoy and Apple Berry cited earlier.
4.3.1 **Research Questions for Phase One**

For the first phase of the study for identifying teacher's characteristic and principals characteristic in the context of openness of the school climates, the following research questions were posed:

1. Do teacher significantly differ as to the perceived characteristics of teacher of "Open" and "Closed" climate schools?

2. Do teachers significantly differ as to the perceived characteristic of the principal of "Open" and "Closed" climate schools?

3. Do teachers significantly differ as to the perceived "Openness" scores of the "Open and "Closed climate school ?

The above questions were utilized in generating the null hypotheses for the first phase, which would be stated in the fifth chapter before testing them.

The first and second questions would each elicit four hypotheses as there are four subtests in the test. The third question has only one hypothesis Thus, There would be nine hypotheses of phase one.

4.3.2 **The Sample and its Selection Criteria**

The initial sample for this study was drawn from 60 schools which met the following criteria:
1. The schools should be situated in Ahmedabad city.

2. Such schools should be approved by the State Department of Education.

3. The members of the sample should be only principals and teachers of both sex.

4. The teachers must be having at least three years of tenure in their position.

Initially 93 schools were randomly selected by employing stratified sampling procedure. The teachers of these schools were given OCDQ tool for their opinion. Complete response for each item was the criterion for accepting the form. Thus 560 teachers and 60 principals responded the tool. The teachers of 63 schools responded the tool completely and correctly. So out of 63, 60 schools were selected. Their responses were scores according to the instructions given in the manual. The scores were tabulated and their means, variances and openness scores were computed.

Out of these 60 schools 20 schools having high openness scores and 20 schools having low openness scores were selected, the other 40 schools having median openness scores were ignored from the sample. Thus 40 schools remained in this study, 20 each of two categories, open and closed climate schools.
The teachers of these 40 schools had been given the
other tools for collection of relevant data.

4.4 Phase Two: Leadership Behaviour

The second phase relates to Leadership Behaviour. It
has two dimensions: Consideration (C) and initiating
Structure (IS) as delineated by Halpin. Consideration refers
to behaviour indicative of friendship, mutual trust, respect
and warmth in the relationship between the principal and
the members of the staff. Initiating structure (IS) in
interaction refers to the principals behaviour in delineating
the relationship between himself and the members of his
work group and endeavouring to established well defined
patters of organization, channels of communication and
methods of procedure.

4.4.1 Identification of Leadership Behaviour

One of the major objectives of the exploratory study
was to identify the Leadership behaviour of the principal.
The basic requirement for this purpose is a valid and
reliable tool.

4.4.2 The Instrument and Its reliability

In order to identify leadership behaviour of the
principals of the schools of Ahmedabad city for the present
study, the Leadership Behaviour Description Questionnaire
(LBDQ) revised by Halpin and Winer had been used.
The two dimension IS and C are considered as the key to measure the leadership patterns. There are fifteen items for each dimension making the questionnaire of 30 items in all. The original instrument had been translated in Gujarati Language. After into their consideration, the final version of Gujarati was edited and printed for the use on Gujarati LBDQ. For this, four schools of Ahmedabad city selected and the Gujarati LBDQ was administered to teachers of either sex having varying experiences and qualification. The same LBDQ was administered to the same group of teachers after an interval of 40 days. The scores of 40 days. The scores of both administrations were co-related on two dimensions; for IS the correlation was 0.78 while for C it was held that the LBDQ was 0.82 Looking to the size of the correlation it was held that the LBDQ was reasonably reliable for the purpose of the present investigation. Gujarati LBDQ is appended.

4.4.3 Mode of Administration of LBDQ

Each participant (Teacher or Principal) of the sub-population of the sample was required to complete LBDQ from two frames of reference.

First he responded on the basis of how he perceived his/her principal, which provided what is hereafter referred to as the "Real" score.
Next, he responded on the basis of how he would like the principal to act, which provided what is hereafter referred to as the "Ideal" score.

Usable responses were received from 40 schools. They were from the principals and the teachers.

The following response rates were obtained from the referent group:

1. Principals 100%
2. Teachers 97%

Askoff states that when the response rate from the group is below 80%, adjustment in responses is needed. In the present case, the minimum response rate was 97%, hence no adjustment was needed for statistical analysis.

4.4.4 Scoring of LBDQ

The scoring scheme for the LBDQ was strictly followed as given in the manual by the authors. Incomplete and inadequate data of the teachers and the principals were discarded.

The total score on the tool was worked out by the summation of the item scores. This was obtained for each individual principal separately for initiating structure (I.S) and consideration (C) dimensions. The scores were labeled as high (H) or low (L), on the basis of their mean score position above or below the grand mean of the respective score.
Research Questions and Research Design for Second Phase

The second phase of research activity dealt with the following two aspects.

(1) Identification of leadership behaviour based on teacher's perception of their principals; and

(2) Difference between the perceptions (Real) and expectations (Ideal) for leadership between referent groups.

Research Questions

(1) Do perceived (Real) and expected (Ideal) behaviour of the principal agree with each other?

(2) Do "Real" and "Ideal" ratings on both the dimensions differ significantly?

(3) Do teachers of open and closed climates view both the dimensions equally?

(4) Does any interaction influence LBDQ scores?

So there were three independent variables and one dependent variable in the second phase of the research; these is shown in table 4.2
TABLE 4.1
Variables and their Nature and Levels

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of the Variable</th>
<th>Nature of Variable</th>
<th>Name of the Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Frame of reference A</td>
<td>Independent</td>
<td>Real</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ideal</td>
</tr>
<tr>
<td>2</td>
<td>Leadership dimensions B</td>
<td>Independent</td>
<td>Initiating Structure I.S</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Consideration   C</td>
</tr>
<tr>
<td>3</td>
<td>Referent Groups C</td>
<td>Independent</td>
<td>Open climate teachers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Closed climate Teachers</td>
</tr>
<tr>
<td>4</td>
<td>LBDQ Scores</td>
<td>Dependent</td>
<td></td>
</tr>
</tbody>
</table>

In order to study the main and interactive effects of the various variables a factorial design would be most suitable\(^4\). Hence a 2x2x2 factorial design was invoked in which levels of all independent variables were fixed levels. So ANOVA model was called a fixed type model.

**Fixed-effect Model**

When the treatments or levels of factors are not randomly selected the ANOVA model is referred to as model I or as a Fixed effect model.
TABLE 4.2

Schematic Representation of 2x2x2 Factorial design.

<table>
<thead>
<tr>
<th>Frame of Reference (A)</th>
<th>Real (1)</th>
<th>Ideal (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS (1)</td>
<td>Con (2)</td>
<td>IS (1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Referent Groups (C)</th>
<th>Open climate teachers (1)</th>
<th>111</th>
<th>121</th>
<th>112</th>
<th>122</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closed climate teachers (2)</td>
<td>211</td>
<td>221</td>
<td>212</td>
<td>222</td>
<td></td>
</tr>
</tbody>
</table>

4.4.5 Definition of Structural Model

The score of the dependent variable (LBDQ) would be analysed keeping in mind the fix effect model of ANOVA and a factorial design of the research. Every design has its unique structural model for its score. For the present research design a complete structural model for a score in a 2x2x2 factorial design is postulated below:

\[ Y = G + A + B + C + AB + AC + BC + ABC + Error \]

Where

\[ Y = \text{Dependent LBDQ Score} \]
\[ G = \text{Grand mean} \]
\[ A = \text{Effect due to frame of reference} \]
\[ B = \text{Effect due to dimensions of LBDQ} \]
\[ C = \text{Effect due to referent groups} \]
4.5 Phase Three: Teacher Morale

As explained earlier in this chapter, the third phase of the investigation would be undertaken. In the third phase the teacher morale as perceived by the teachers of the participating schools acted as the dependent variable.

4.5.1 Measurement of Teacher morale: Instrument and its Reliability

To assess the level of teacher moral, Purdue teacher opinionnaire (PTO) as devised and standardized by Rampel and Bentley had been used. Its validity and reliability coefficients, the populations on which it was standardized was also considered adequate. Therefore, the investigator felt that it was a valid tool for the measurement of the teacher morale. He translated the PTO in Gujarati language and its translation was submitted to 11 experts who were well-versed with Gujarati as well as English language. According to their suggestions, modifications were made in Gujarati version before it was printed. The instrument was adopted by DR D.N.Patel Gujarati. Before using to the large sample the present investigator thought that the reliability of the instrument should be tested on the present sample. He administered the PTO Gujarati version instrument to 40 teachers of both sex. He readministered the same instrument to the same group after the interval of 40 days. The two scores of first and second administrations were correlated. The product Moment correlation was found to be 0.93, which was considered to be high.

4.5.2 Mode of Administration of PTO

Initially sixty schools of the secondary schools teacher of Ahemdabad city were randomly selected, out of which 20 were open climate schools and 20 closed climate ones. The teachers were administered PTO and scored
strictly on the line suggested by the manual. Usable data of teachers were found adequate. The PTO is divided into ten scores representative of ten factors. The summation of these ten scores would give a composite score of the teacher morale. The ANOVA procedure was used to determine whether significant differences existed among them.

4.5.3 Factors of PTO

The ten TOP factors, to gather with brief description and test-retest correlation in the brackets are given below:

**Factor 1 - Teacher report with principal**

It deals with the teacher's feelings about the principal (.88)

**Factor 2 - Satisfaction with teaching**

It pertains to teacher relationship with students and feelings of satisfaction with teaching (.83)

**Factor 3 - Report among teachers**

It takes into account teacher's relationship with each other (.80)

**Factor 4 - Teacher teacher's salary**

It pertains primarily to the teacher's feelings about salaries and its policies (.82)

**Factor 5 - Teacher load deals**

Deals with such matters as record keeping clerical work, community demands and keeping up to date professionally (.81)

**Factor 6 - Curriculum issues**

They solicit teachers relations to the adequacy of school programme in meeting student needs and in preparing students for effective citizenship (.75)
Factor-7 Teacher Status

It samples feeling about prestige, security and benefits afforded by teacher (.81)

Factor-8 Community Support of Education

It deals with community understanding and willingness to support a sound educational program (.78)

Factor-9 Schools Facilities and Services

They have to do with the adequacy of facilities, supplies and equipment's, and the efficiency of procedure for obtaining materials and services (.80)

Factor-10 Community Pressures

They give special attention to community expectations of teachers personal standards, his participation in outside school activities and his freedom to discuss controversial issues in the classroom (.62)

The Reliability of composite PTO score is .87

The distribution of the items of each factor together with the maximum scores is given below in Table 4.3 below.

<table>
<thead>
<tr>
<th>Factor No.</th>
<th>No of items</th>
<th>Maximum score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>20</td>
<td>80</td>
</tr>
<tr>
<td>2.</td>
<td>20</td>
<td>80</td>
</tr>
<tr>
<td>3.</td>
<td>14</td>
<td>56</td>
</tr>
<tr>
<td>4.</td>
<td>07</td>
<td>28</td>
</tr>
<tr>
<td>5.</td>
<td>11</td>
<td>44</td>
</tr>
<tr>
<td>6.</td>
<td>05</td>
<td>20</td>
</tr>
<tr>
<td>7.</td>
<td>08</td>
<td>32</td>
</tr>
<tr>
<td>8.</td>
<td>05</td>
<td>20</td>
</tr>
<tr>
<td>9.</td>
<td>05</td>
<td>20</td>
</tr>
<tr>
<td>10.</td>
<td>05</td>
<td>20</td>
</tr>
</tbody>
</table>

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100         400
The responses of teachers on PTO would be tabulated in the next chapter while analysing them. The raw scores and their means would be utilized for the purpose.

**4.5.4 Research Questions for the Phase three.**

Looking to the problem of investigation, the following questions that relate to the third phase of research were posed.

1. What are the different factors that existed for differential teacher morale under principals differing in leadership behaviour?
2. What are the quadrants instrumental in inducing maximum PTO factors?
3. What are the quadrants instrumental in inducing least PTO factor?

**4.5.5 Research Design for the Third Phase.**

This phase of the investigation dealt with the relationship that existed between principal and the teacher morale. Here the behavioural patterns of the principal would act as independent variable operating at four levels while the PTO factors operating at ten level. As dependent variable the researcher was not interested in the main effects of leadership quadrants as to how they produced differential teacher moral. The factorial design of 10 x 4 would be invoked but the different effects of interaction would be shown as composite sum of squares.
TABLE no. 4.4

Schematic Representation of Factorial Design of 10X4

<table>
<thead>
<tr>
<th>Quadrants (A)</th>
<th>Leadership Behaviour Patterns</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTO Factors (B)</td>
<td>(I)</td>
</tr>
<tr>
<td>1.</td>
<td>11</td>
</tr>
<tr>
<td>2.</td>
<td>21</td>
</tr>
<tr>
<td>3.</td>
<td>31</td>
</tr>
<tr>
<td>4.</td>
<td>41</td>
</tr>
<tr>
<td>5.</td>
<td>51</td>
</tr>
<tr>
<td>6.</td>
<td>61</td>
</tr>
<tr>
<td>7.</td>
<td>71</td>
</tr>
<tr>
<td>8.</td>
<td>81</td>
</tr>
<tr>
<td>9.</td>
<td>91</td>
</tr>
<tr>
<td>10.</td>
<td>101</td>
</tr>
</tbody>
</table>

4.5.6 Definition of Structural Model for a Score.

Here the teacher morale score obtained by the administration of PTO to teachers serving under their principals would be analyzed. The ANOVA would show the main effects of leadership behavioural patterns known as quadrants and the different factors of PTO.

Complete structural model for a score of teacher morale in a 1 X 4 factorial design is postulated below:

\[ Y = G + A + B + AB + Error \]

Where

- \( G \) = Grand mean
- \( A \) = Effects due to Quadrants
- \( B \) = Effects due to PTO factors
For both the phases of research, i.e. second and third phased the factorial design would have equal number of cell size in order to have precision and accuracy in interpreting the results.

4.6 Phase Four: Pupil's Achievement.

Pupil's academic achievement depends upon many factors. Foremost among them is the school. Its teachers home environment, school environments, including its climate, its teachers morale and principal behaviour towards them. The positive points of all these factors reflect upon the pupil's achievement.

4.6.1 Variables of phase four

Hence for this phase the investigator selected the following as independent variables.

1. Principal leadership (A) behaviour. It has two levels - Initiating structure (IS) and consideration (C)

2. Teacher morale (B) It is the fulcrum around which rotates pupil's academic achievement. It has also two levels - High teacher morale (H) and low teacher morale (L)

3. School climate (C) is the essential variable for teachers, principals and the pupils. It has two levels - open climate and closed climate.

4. Pupil's academic achievement is the barometer to measure the health, climate and caliber of the school, its staff and its pupils. The achievement scores of std. X i.e. S.S.C.E scores for the year 1999 have been taken from the marksheets of the respective schools which would act as dependent variables.
4.6.2 Research Questions of Phase Four:

1. What is the impact of principal leadership behaviour upon the pupils achievement source (PAS)?

2. What is the impact of teacher morale upon the PAS?

3. What is the impact of school climate upon the PAS?

4. What is the influence of interaction between/among the independent variables upon the PAS?

4.6.3 Research Design for Phase Four

The investigator was interested in the interactions between the three independent variables, hence he invoked a factorial design of 2X2X2 dimensions where

1. principal Leadership Behaviour acted at two levels,
2. teacher morale acted at two levels and
3. school climate acted at two levels.

4.6.4 Structural Model

The structural model for the source is postulated as under.

The ANOVA is a Fixed effect model
$Y = G + A + B + C + AB + AC + BC + ABC + \text{Error}$

Where

$Y =$ Expected score

$G =$ Grand Mean

$A =$ Effect due to principal (Leadership) Behaviour

$B =$ Effect due to Teacher morale

$C =$ Effect due to school climate.

In the subsequent chapter No. 5 the data analysis and its interpretations would be considered.
Chapter Reference:

2. A.W.Halpin and Don Croft Organizational Climate of School, Macmillan, Newyork, 1966. P 113
5. Ibid. P 308
6. Ibid. P 308-39