CHAPTER - IV

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CHAPTER-IV

RESEARCH METHODOLOGY

4.1 Introduction

A research cannot be evaluated unless its procedure is reported in sufficient detail. The investigator should adopt a systematic and appropriate procedure in conducting the research. A careful consideration is being given in the selection of tools, collection of data and analyses of data. The accuracy, reliability and validity of the research findings depend on the correct and careful choice of the tools. The details regarding the variables, hypotheses choice of the tools, selection of the sample, collection and analyses of data are outlined in this chapter.

4.2 Research Design

The present study is a descriptive survey research. The research design specifies the questions to be investigated, the process of sample selection, methods of procedure to be followed, measurements to be obtained and comparison and other analyses to be made. The research design of the study is presented in the table-4.1.
### Table-4.1: Research Design

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Variable studied</th>
<th>Tools used</th>
<th>Sample</th>
<th>Statistics used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Leadership Behaviour of Heads of Schools</td>
<td>Leadership Behaviour Description Questionnaire</td>
<td>100 Secondary Schools and 504 Assistant Teachers</td>
<td>Descriptive, Differential, Correlational Regression and Discrimination Function Analyses</td>
</tr>
<tr>
<td>2</td>
<td>Teachers Efficacy</td>
<td>Role Efficacy Scale</td>
<td>100 Secondary Schools and 504 Assistant Teachers</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Teacher Commitment</td>
<td>Teacher Commitment Inventory</td>
<td>100 Secondary Schools and 504 Assistant Teachers</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Organizational Culture</td>
<td>Organizational Culture Profile</td>
<td>100 Secondary Schools and 504 Assistant Teachers</td>
<td></td>
</tr>
</tbody>
</table>

### 4.3 Variables of the Study

1. Leadership Behaviour
2. Teacher Efficacy
3. Teacher Commitment
4. Organizational Culture
5. Sex
6. Age
7. Type of Management
8. Educational Qualification
9. Teaching Experience
4.4 Hypotheses of the Study

The following hypotheses are formulated based on the objectives of the study.

**Hypothesis:** Schools with Heads having different leadership behaviour (consideration and initiating structure) as perceived by the teachers do not differ with respect to organizational culture and its dimensions.

1. Openness,
2. Confrontation,
3. Trust,
4. Authenticity,
5. Pro-action,
6. Autonomy,
7. Collaboration and
8. Experimentation

**Hypothesis:** Teachers working with Heads having different leadership behaviour (consideration and initiating structure) as perceived by them do not differ with respect to teacher efficacy and its dimensions.

1. Centrality,
2. Integration,
3. Pro-activity,
4. Creativity,
5. Inter-role linkage,
6. Helping Relationship,
7. Super ordination,
8. Influence,
9. Growth, and
10. Confrontation

**Hypothesis:** Teachers working under Heads having different leadership behaviour (consideration and initiating structure) as perceived by them do not differ with respect to teacher commitment and its dimensions.

1. Psychological perspective,
2. Sociological perspective,
3. Commitment towards the profession,
4. Commitment towards the institution, and
5. Commitment towards the students.

**Hypothesis:** Male and female Heads of schools do not differ with respect to leadership behaviour and its dimensions (consideration and initiating structure) as perceived by the teachers.

**Hypothesis:** Heads of schools belonging to different age groups (25-35 years, 36-45 years and 46+ years) do not differ with respect to leadership
behaviour and its dimensions (consideration and initiating structure) as perceived by the teachers.

**Hypothesis:** Heads of schools with different teaching experience (<15 years, 16-25 years and 25+ years) do not differ with respect to leadership behaviour and its dimensions (consideration and initiating structure) as perceived by the teachers.

**Hypothesis:** Heads of schools with different educational qualification (UG and PG) do not differ with respect to leadership behaviour and its dimensions (consideration and initiating structure) as perceived by the teachers.

**Hypothesis:** Heads of schools working in different type of schools (boys, girls and co-education) do not differ with respect to leadership behaviour and its dimensions (consideration and initiating structure) as perceived by the teachers.

**Hypothesis:** Heads of schools working in schools adopting to different medium of instruction (Kannada, English and Urdu) do not differ with respect to leadership behaviour and its dimensions (consideration and initiating structure) as perceived by the teachers.

**Hypothesis:** Heads of schools working in different type of management (Government, aided and unaided) do not differ with respect to leadership behaviour and its dimensions (consideration and initiating structure) as perceived by the teachers.
Hypothesis: Heads of schools working in rural and urban areas do not differ with respect to leadership behaviour and its dimensions (consideration and initiating structure) as perceived by the teachers.

Hypothesis: There is no significant relationship between leadership behaviour (consideration and initiating structure) of Heads of schools as perceived by the teachers and organizational culture and its dimensions (openness, confrontation, trust, authenticity, pro-action, autonomy, collaboration and experimentation) of schools.

Hypothesis: There is no significant relationship between leadership behaviour (consideration and initiating structure) of Heads of schools as perceived by the teachers and teacher efficacy and its dimensions (centrality, integration, pro-activity, creativity, inter role linkage, helping relationship, super ordination, influence, growth and confrontation).

Hypothesis: There is no significant relationship between leadership behaviour (consideration and initiating structure) of Heads of schools as perceived by the teachers and teacher commitment and its dimensions (psychological perspective, sociological perspective, commitment towards the profession, commitment towards the institution and commitment towards the students).

4.5 Tools and Techniques

The following tools were used for collection of the data required for the present study.
i. Leadership Behaviour Description Questionnaire (LBDQ)

ii. Role Efficacy Scale (RES)

iii. Teacher Commitment Inventory (TCI)

iv. Organizational Culture Scale (OCS)

Each of these tools is discussed briefly as follows:

4.5.1 Leadership Behaviour Description Questionnaire (LBDQ)

The leadership behaviour description questionnaire, popularly known as L.B.D.Q. developed by E.A. Fleishman (1973) was employed for the purpose of collecting data on leadership behaviour of secondary school Heads as perceived by their respective teachers.

This is a 48 item questionnaire divided into two independent areas of leadership called, 'Consideration' and 'Initiating Structure'. The first area includes 28 items and the second area is made up of 20 items. The scale is designed to find answers to the questions, what does your own Head of the school actually do? All the 48 items are presented with a 5-point scale (continuous answer) that has scoring weights of 1 to 5, depending on the items orientation to the total dimension. The highest score is 112 for 'Consideration' and 80 for 'Initiating Structure'.

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By using this questionnaire, it is possible to get a view of how a Head of the school thinks he should lead and compare this view with an assessment by his subordinates (teachers) of his actual leadership performance.

i. Consideration: That is being friendly and approachable creating pleasant group members, treating them as equals, giving advance information about changes, concern for personal welfare of their respective teachers willingness to make changes and explain the rationale of decision accompanied by consultative actions.

ii. Initiating Structure: That is clearly defining own role and letting group members know what is expected of them, planning and organizing the group tasks, encouraging use of uniform procedure, trying out own ideas in the group, clarifying own attitude to the group, deciding for the group members what they should do and how, assigning specific to them, ensuring that their own role in the group is understood by the members, scheduling work and maintaining performance schedules.

The scoring scheme of the tool is of 5 anchoring points of 5,4,3,2,1) (Always, Often, Occasionally, Seldom and Never) and reverse scoring was adopted for negative items.
### Table 4.2: Dimensionwise Distribution of Items of Leadership Behaviour Description Questionnaire

<table>
<thead>
<tr>
<th>Tool Dimensions</th>
<th>Item Numbers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership Behaviour Description Questionnaire</td>
<td>• Consideration 1,2,3,4,5*,6,7*,8,9*,10,11*,12*,13*,14,15,16*,17*,18*,19,20,21*,22,23,24,25,26,27,28</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>• Initiating Structure 1,2,3*,4,5,6,7*,8,9,10,11,12,13,14,15,16,17,18,19,20</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>48</strong></td>
</tr>
</tbody>
</table>

The asterisk mark indicates the negative items.

**Validity and Reliability:**

Reliability co-efficient established by split half method was \( r = 0.7901 \) and, validity was established by taking the square root of reliability \( \sqrt{0.7901} = 0.89 \).

Thus this tool is found to be reliable and valid.

### 4.5.2 Role Efficacy Scale

To collect the relevant data the Role Efficacy Scale (RES) of Udai Pareek (2002) was adopted. The scale consists of 20 items under 10 dimensions. Role effectiveness can be assessed through this instrument. The 10 aspects can be probed to work out ways to increase effectiveness by increasing the aspect on which one's score is low.
The role efficacy scale was a structured instrument consisting of 20 triads of statements. A respondent marks one statement in each triad that describes his role most accurately. (There are two statements for each dimension of role efficacy and the scoring pattern followed is +2, +1 or -1.)

The regular scale is completed by assistant teachers for their own role, especially the role being supervised by the Heads of secondary schools.

**Dimensions of Role Efficacy Scale**

The 10 dimensions of Role Efficacy Scale are as stated below:

a. Centrality  
b. Integration  
c. Pro-activity  
d. Creativity  
e. Inter-role linkage  
f. Helping relationship  
g. Super ordination  
h. Influence  
i. Growth  
j. Confrontation
There are two statements for each dimension of role efficacy and the scoring pattern followed was +2, +1 or -1. The three alternatives for each statement were pre-weighted.

**Table-4.3: Dimensionwise Distribution of Items of Role Efficacy Scale**

<table>
<thead>
<tr>
<th>Tool</th>
<th>Dimensions</th>
<th>Item Numbers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role Efficacy Scale</td>
<td>Centrality</td>
<td>1,11</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Integration</td>
<td>2,12</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Pro-activity</td>
<td>3,13</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Creativity</td>
<td>4,14</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Inter-role linkage</td>
<td>5,15</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Helping relationship</td>
<td>6,16</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Superordination</td>
<td>7,17</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Influence</td>
<td>8,18</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Growth</td>
<td>9,19</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Confrontation</td>
<td>10,20</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>

**Scoring**

The following key can be used for scoring responses.
<table>
<thead>
<tr>
<th>Dimension</th>
<th>Item</th>
<th>a</th>
<th>b</th>
<th>c</th>
<th>Item</th>
<th>a</th>
<th>b</th>
<th>c</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centrality</td>
<td>1</td>
<td>+2</td>
<td>+1</td>
<td>-1</td>
<td>11</td>
<td>+2</td>
<td>+1</td>
<td>-1</td>
</tr>
<tr>
<td>Integration</td>
<td>2</td>
<td>+1</td>
<td>-1</td>
<td>+2</td>
<td>12</td>
<td>-1</td>
<td>+2</td>
<td>+1</td>
</tr>
<tr>
<td>Proactivity</td>
<td>3</td>
<td>-1</td>
<td>+1</td>
<td>+2</td>
<td>13</td>
<td>-1</td>
<td>+2</td>
<td>+1</td>
</tr>
<tr>
<td>Creativity</td>
<td>4</td>
<td>+1</td>
<td>+2</td>
<td>-1</td>
<td>14</td>
<td>+2</td>
<td>+1</td>
<td>-1</td>
</tr>
<tr>
<td>Inter-role linkage</td>
<td>5</td>
<td>-1</td>
<td>+2</td>
<td>+1</td>
<td>15</td>
<td>+2</td>
<td>+1</td>
<td>-1</td>
</tr>
<tr>
<td>Helping relationship</td>
<td>6</td>
<td>+1</td>
<td>+2</td>
<td>-1</td>
<td>16</td>
<td>-1</td>
<td>+2</td>
<td>+1</td>
</tr>
<tr>
<td>Super ordination</td>
<td>7</td>
<td>-1</td>
<td>+2</td>
<td>+1</td>
<td>17</td>
<td>+1</td>
<td>+2</td>
<td>-1</td>
</tr>
<tr>
<td>Influence</td>
<td>8</td>
<td>+1</td>
<td>-1</td>
<td>+2</td>
<td>18</td>
<td>+2</td>
<td>+1</td>
<td>-1</td>
</tr>
<tr>
<td>Growth</td>
<td>9</td>
<td>+1</td>
<td>-1</td>
<td>+2</td>
<td>19</td>
<td>+2</td>
<td>+1</td>
<td>-1</td>
</tr>
<tr>
<td>confrontation</td>
<td>10</td>
<td>-1</td>
<td>+2</td>
<td>+1</td>
<td>20</td>
<td>+1</td>
<td>-1</td>
<td>+2</td>
</tr>
</tbody>
</table>

**Reliability and Validity**

Sen (1982) reported a retest reliability of 0.68 significant at 0.001 level. This shows the high stability of the scale.
The reliability of the Role Efficacy Scale was computed using split-half method of reliability. The overall reliability of the scale was 0.3094 and the overall validity was established by taking the square root of reliability that is \( \sqrt{0.3094} = 0.5562 \)

Thus this tool is found to be reliable and valid.

4.5.3 Teacher Commitment Inventory

Commitment is intangible; it cannot be seen or isolated. But it is possible to determine the quality of morale by observation of the way people act.

The Teacher Commitment Inventory was anchored by the investigator in consultation with the research guide, which covers five areas of commitment. They are:

i. Psychological perspective
ii. Sociological perspective
iii. Commitment towards the institution
iv. Commitment towards the profession
v. Commitment towards the students.
Scoring

The teacher commitment inventory comprises 21 items distributed among each dimension. It is having a 5-point scale. All the selected assistant teachers were asked to indicate their responses, to each of the hundred statements on a five point scale, these are:

a- Strongly Agree    d. Disagree
b- Agree             e. Strongly disagree
c- Undecided

If the respondent strongly agreed with the item he had to mention 'a'; if he agreed with the items he had to mention 'b'; if he was undecided with the item, he had to mention 'c'; if he disagreed with the item, he had to mention 'd'; if he strongly disagreed with the item, he had to mention 'e'.

Positive items have to be given marks as 5, 4, 3, 2 and 1 for strongly agree, agree, undecided, disagree and strongly disagree.

Negative items have to be given marks in a reverse direction as 1, 2,3, 4 and 5 for strongly agree, agree, undecided, disagree and strongly disagree respectively.
Table-4.5: Dimensionwise Distribution of Items of Teacher Commitment Inventory

<table>
<thead>
<tr>
<th>Tool</th>
<th>Dimensions</th>
<th>Item Numbers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Commitment Inventory</td>
<td>Psychological perspective</td>
<td>3,7,9,15,19*</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Sociological perspective</td>
<td>13,16,20</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Commitment towards the profession</td>
<td>1,2,6,17,18*</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Commitment towards the institution</td>
<td>8,10,11,12,21*</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Commitment towards the students</td>
<td>4,5,14</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>21</strong></td>
<td></td>
</tr>
</tbody>
</table>

The asterisk mark indicates the negative items.

Reliability and Validity

The reliability of the teacher commitment inventory was computed using split-half method of reliability. The overall reliability of the inventory was 0.7411 and the overall validity was established by taking the square root of reliability, that is, $\sqrt{0.7411} = 0.8608$

Thus this tool is found to be reliable and valid.
4.5.4 Organizational Culture Scale (OCTAPACE Profile)

For the purpose of collecting data about organizational culture of secondary schools, the Organizational Culture Scale developed by Udai Pareek (2002) was used. The Organizational Culture Scale (OCTAPACE profile) is a 40 item instrument that gives the profile of the organizational ethos in eight values.

Components: The instrument comprises the eight values, which are stated as below:

i. Openness
ii. Confrontation
iii. Trust
iv. Authenticity
v. Pro-action
vi. Autonomy
vii. Collaboration
viii. Experimentation

The instrument contains two parts. In part-I, values are stated in items 1 to 24 (three statements of each of the eight values), and the respondent is required to check (on a 4 point scale) how much each item is valued in his
organization. Part-2 contains sixteen statements on beliefs, two each for eight values, and the respondent checks (on a 4-point scale) how widely each of them is shared in the organization.

**Table-4.6: Dimensionwise Distribution of Items of Organizational Culture Scale (OCTAPACE Profile)**

<table>
<thead>
<tr>
<th>Tool</th>
<th>Dimensions</th>
<th>Item Numbers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational</td>
<td>1. Openness</td>
<td>1,9,17,25*,33,</td>
<td>5</td>
</tr>
<tr>
<td>Culture Scale</td>
<td>2. Confrontation</td>
<td>2,10,18,26*,34</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>3. Trust</td>
<td>3,11,19,27,35*</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>4. Authenticity</td>
<td>4,12*,20,28*,36</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>5. Pro-action</td>
<td>5,13,21,29,37</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>6. Autonomy</td>
<td>6,14*,22*,30*,38</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>8. Experimentation</td>
<td>8,16,24,32,40*</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>40</td>
</tr>
</tbody>
</table>

The asterisk mark indicates the negative items.

**Scoring**

To make scoring easier, an answer sheet is provided. From the key the items marked with an asterisk are first reversed so that 4 becomes 1, 3 becomes 2, 2 becomes 3 and 1 becomes 4. This makes all items unidirectional. The rows are then added. The eight rows represent the eight aspects (OCTOPACE) in the same order. The scores on each aspect range from
5 to 20. In a group, participants can themselves score their completed answer sheets.

Openness: 1, 9, 17, 25*, 33
Confrontation: 2, 10, 18, 26*, 34
Trust: 3, 11, 19, 27, 35*
Authenticity: 4, 12*, 20, 28*, 36
Proaction: 5, 13, 21, 29, 37
Autonomy: 6, 14*, 22*, 30*, 38
Collaboration: 7, 15, 23*, 31*, 39
Experimentation: 8, 16, 24, 32, 40*

Reliability and Validity

Split-half reliability of the Organizational Culture Scale (OCTAPACE profile) on a sample of 135 college/university teachers was found to be 0.81. Alpha coefficient for a group of 153 managers was found to be 0.90.

Validity was established by taking the square root of reliability that is

$\sqrt{0.81} = 0.9$

Thus this tool is found to be reliable and valid.

4.6 Population and Sample of the Study

For administrative convenience the education department of the Belgaum district has been divided into two parts that is, Belgaum North and Belgaum South. The data required for the present study was collected from

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the Heads and the assistant teachers of secondary schools working in Belgaum (South) district.

Finally the data was collected from 100 Heads of schools and 504 assistant teachers. All the Heads of 100 secondary schools were involved in the study. Out of these 100 schools 43 were government, 46 aided and 11 unaided secondary schools.

The population and sample of the study is presented in the table-4.7.
Table-4.7: Details of Sample Selected

<table>
<thead>
<tr>
<th>Talukas of Belgaum (south) District</th>
<th>Type of Management</th>
<th>Sex of Schools</th>
<th>Medium of Instruction</th>
<th>Heads of Secondary Schools</th>
<th>Assistant Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Govt</td>
<td>Aided</td>
<td>Un-aided</td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td>Belgaum</td>
<td>06</td>
<td>16</td>
<td>03</td>
<td>01</td>
<td>02</td>
</tr>
<tr>
<td>Bailhongal</td>
<td>18</td>
<td>11</td>
<td>03</td>
<td>01</td>
<td>03</td>
</tr>
<tr>
<td>Khanapur</td>
<td>02</td>
<td>06</td>
<td>02</td>
<td>-</td>
<td>02</td>
</tr>
<tr>
<td>Ramdurga</td>
<td>05</td>
<td>05</td>
<td>02</td>
<td>-</td>
<td>02</td>
</tr>
<tr>
<td>Saundatti</td>
<td>12</td>
<td>08</td>
<td>01</td>
<td>01</td>
<td>03</td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>46</td>
<td>11</td>
<td>03</td>
<td>12</td>
</tr>
<tr>
<td>Grand Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
4.7 Data Collection

For the purpose of data collection, the investigator personally visited the schools giving clear cut instructions to assistant teachers to fill up the responses to the items in the tools. Heads of schools and assistant teachers were personally administered the tools. The investigator personally collected the filled-in proformas and tools from 100 Heads of secondary schools and 504 assistant teachers of Belgaum (south) district. The Leadership Behaviour Description Questionnaire, Role Efficacy Scale, Teacher Commitment Inventory and Organizational Culture Scale were administered to the assistant teachers. The information proformas were filled by the Heads of the schools. The confidentiality of the collected data was maintained as promised.

4.8 Data Analyses

The following statistical techniques were used, for the purpose of analysis of the empirical data:

i. Descriptive Analysis
ii. Differential Analysis
iii. Correlation Analysis
iv. Regression Analysis
v. Discriminant Function Analysis
4.9 Conclusion

The methodology adopted is described in this chapter. The data collected from the groups of respondents, namely Heads of schools and assistant teachers are analyzed using appropriate statistical techniques for description and inference. The details of the data analyses is presented in the next chapter.