CHAPTER -IV

RESEARCH METHODOLOGY
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RESEARCH METHODOLOGY

4.1 Introduction

A study 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 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 choice of the tools, Selection of the sample, collection and analysis of data are outlined in this chapter.

4.2 Research Design

The present study is a descriptive survey type research.

4.3 Hypotheses

The objectives of the study are stated in Chapter-I. The following hypotheses are generated based on the objectives of the study.

Major Hypothesis-1

Schools with different levels of effectiveness differ in students' behaviour adjustment to schools.
Sub Hypothesis

Schools with different levels of effectiveness differ in the dimensions of students' behaviour adjustment to schools -

(i) Studiousness
(ii) Compliance
(iii) Teacher contact

Major Hypothesis-2

Schools with different levels of effectiveness differ in students' motivation towards schools.

Sub Hypothesis

Schools with different levels of effectiveness differ in the dimensions of students' motivation towards schools -

(i) Cognitive domain
(ii) Effective domain and
(iii) Moral domain

Major Hypothesis-3

Schools with different levels of effectiveness differ in the students' involvement in school activities.

Sub Hypothesis

Schools with different levels of effectiveness differ in the dimensions of students' involvement in school activities-
(i) Discipline Problems
(ii) Extra Curricular Activities
(iii) Willingness to work
(iv) Organizational Ability

Major Hypothesis-4

Schools with different levels of effectiveness differ in students’ personal effectiveness.

Sub Hypothesis

Schools with different levels of effectiveness differ in the dimensions of students’ personal effectiveness.

(i) Self Disclosure
(ii) Openness to Feedback
(iii) Perceptiveness

Major Hypothesis-5

Schools with different levels of effectiveness differ in classroom climate.

Sub Hypotheses

Schools with different levels of effectiveness differ in the dimensions of classroom climate-

(i) Authenticity
(ii) Legitimacy
(iii) Productivity
Major Hypothesis -6

Schools with different levels of effectiveness differ in school atmosphere

Sub Hypotheses

Schools with different levels of effectiveness differ in the dimensions of school atmosphere –

(i) Esprit
(ii) Hindrance
(iii) Authority
(iv) Administration

Major Hypothesis -7

Schools with different levels of effectiveness differ in organizational culture

Sub Hypotheses

Schools with different levels of effectiveness differ in the dimensions of organizational culture –

(i) Openness
(ii) Confrontation
(iii) Trust
(iv) Authenticity
(v) Pro-action
Major Hypothesis-8

Schools with different levels of effectiveness differ in organizational health

Sub Hypotheses

Schools with different levels of effectiveness differ in the dimensions of organizational health

(i) Institutional Integrity
(ii) Principal Influence
(iii) Consider
(iv) Initiating Structure
(v) Resource Support
(vi) Morale
(vii) Academic Emphasis

Major Hypothesis-9

Schools with different types of management (Government, Aided Unaided) differ in their levels of effectiveness.
Major Hypothesis-10

Schools of different types (Boys, Girls and Co-education) differ in their levels of effectiveness.

(i) Boys
(ii) Girls
(iii) Co-education

4.4 Research Tools

The research tools that are used for the present study are described in detail in the following pages.

4.4.1 Behaviour Adjustment in School Inventory

Behaviour in School Inventory developed and standardized by Youngman (1979) consists of thirty four items with 'Yes' or 'No' alternative responses. It was administered to the students to identify the following three dimensions of behavioural adjustment in school.

1. Studiousness
2. Compliance
3. Teacher contact

Studiousness scale consists of twelve items and measures the time spent (in terms of more or less) and also the interest towards learning by the students.
Compliance scale consists of fifteen items and measures the activities of students in terms of others' expectations.

Teacher contact scale consists of seven items and measures the relationship with teachers. The scoring scheme of the tool is Yes = 1 and No = 0. Reverse scoring was adopted for negative items.

Reliability and Validity

The reliability was established by the author and worked out to 0.86. In the present study the reliability of the tool was established by test and retest method and the correlation between the two tests worked out to be 0.84. The validity of the inventory as measured from reliability was found as 0.91.

4.4.2 Kozeki's Motivational Inventory

Kozeki's Motivational Inventory consists of eighteen statements with 'Yes' or 'No' alternative responses. It was administered to the students to assess the motivation of students in the following three domains.

1. Affective domain
2. Cognitive domain and
3. Moral domain
Affective domain consists of six statements and measures the following dimensions of motivation.

(i) Warmth
(ii) Identification and
(iii) Sociability

Warmth refers to the encouragement and interest actively shown by parents. Identification refers to the feeling of empathy with adults and wanting to please them and sociability refers to enjoying collaborative work and activities with peers.

Cognitive domain contains six statements and measures the following dimensions of motivation.

(i) Independence
(ii) Competence
(iii) Interest

Independence refers to satisfaction from working without help from others. Competence refers to rewards from a recognition of developing knowledge and skills and interest refers to enjoyment derived from ideas.

Moral domain contains six statements and measures the following three dimensions of motivation.
(i) Trust

(ii) Compliance and

(iii) Responsibility

Trust refers to satisfaction from doing things thoroughly well. Compliance refers to preferring a secured behaviour according to rules or norms and responsibility refers to accepting the consequences of action and monitoring one’s own behaviour accordingly. The scoring scheme of the tool is Yes = 1, No = 0. Reverse scoring was adopted for negative items.

Reliability and Validity

The reliability was established by the author Kozeki and was reported to be 0.74. The researcher also established the reliability of the tool by test and retest method and the correlation between the two tests worked out to be 0.71. The validity of the tool was measured by the index of reliability and it was 0.84.

4.4.3 Students’ Involvement Questionnaire

A four point Likert type rating scale was developed by Selvaraju (1993). The questionnaire has sixteen statements and was administered to the teachers to measure the following four dimensions of students’ involvement in school activities.
(i) Discipline problem
(ii) Willingness to work
(iii) Organization ability
(iv) Participation in extra curricular activities.

The scoring scheme of the tool is of four anchoring points (3, 2, 1 and 0). Reverse scoring was adopted for negative items.

Reliability and Validity

The reliability was computed for the questionnaire by the author and it worked out to be 0.69. In the present study test-retest reliability was established which worked out to be 0.70. The validity as measured by the index of reliability was found as 0.83.

4.4.4 Personal Effectiveness Scale

The Personal Effectiveness scale gives personal effectiveness types in terms of self-disclosure, feedback and perceptiveness. It contains 15 statements, five for each of the three aspects. A respondent checks each statement, indicating the extent to which it is true of him or her (on a 5 point scale). This instrument is self-administered.

The ratings are transferred to the score sheet. The total scores on openness, feedback and perceptiveness are given, each ranging from 0-20. The score 11 can be used as the cut-of point for classifying the scores, on each
of the three aspects, as low and high. The respondent marks the appropriate category (one out of eight) given on part B of the score sheet, which is his effectiveness type.

**Reliability**

The reliability of the scale was found by split half method and coefficient of reliability of the personal effectiveness scale was found to be was 0.8347.

**Validity**

The validity as calculated from reliability was found to be 0.9136.

**4.4.5 Classroom Climate Questionnaire**

To assess the classroom climate the Authenticity, Legitimacy and Productivity Questionnaire developed and standardized by Thelan (1981) was administered to the students. The students were asked to indicate their responses on a four point scale namely, very frequently ‘occurs’, ‘often occurs’, ‘sometimes occurs’ and ‘rarely occurs’. The Authenticity, Legitimacy and Productivity instrument consists of twenty four statements and they are keyed to identity the following three dimensions of classroom.

1. Authenticity
2. Legitimacy and
3. Productivity

Authenticity refers to the emotional involvement and mental stimulation of the students in the classroom. Legitimacy refers to the individual and group behaviour of the students which are regulated by authoritative cultural agreements and the productivity refers to the amount and quality of output from the classroom climate. The scoring scheme of the tool is of 4 anchoring points (4, 3, 2, 1) and reverse scoring was adopted for negative items.

Reliability and Validity

The reliability of the tool was established by the author and worked out to be 0.72. The researcher also established the reliability of the tool by test-retest method and the correlation between the two tests worked out to be 0.76. The validity of the tool was measured by the index of reliability and it was 0.87. The detailed description about the tools is presented in Table 4.1.

4.4.6 School Atmosphere Questionnaire

A four point Likert type rating scale was developed by Selvaraju (1993). The questionnaire consists of twenty statements and was administered to the teachers to measure the following four dimensions of school atmosphere.

(i) Esprit
(ii) Authority
Esprit refers to the high degree of pride about the school. Authority refers to the quality of leadership in the school, whereas, hindrance refers to the ease of getting along in the school and administration refers to the procedural formalities of the school. The scoring scheme of the tool is of 4 anchoring points (4, 3, 2, 1) and reverse scoring was adopted for negative items.

Reliability and Validity

Test-retest reliability was computed for the questionnaire by the author and it worked out to be 0.83. In the present study also test-retest reliability was established which worked out to be 0.85. The validity as measured by index of reliability and it was 0.92.

4.4.7 Organizational Culture Profile

The OCTAPACE profile is a 40 item instrument that gives the profile of organization's ethos in eight values. These values are openness, confrontation, trust, authenticity, pro-action, autonomy, collaboration and 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.

In addition to checking the items on the extent of their importance or sharing in the organization, the respondent can also check how much they should be values, or how much the beliefs are useful. Thus both present as well as desired or ideal profiles can be obtained.

To make scoring easier, an answer sheet is provided. From the key (appended), 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 (octapace) 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 | Proaction: | 5, 13, 21, 29, 37 |
| Confrontation: | 2, 10, 18, 26*, 34 | Autonomy: | 6, 14*, 22*, 30*, 38 |
| Trust: | 3, 11, 19, 27, 35* | Collaboration: | 7, 15, 23*, 31*, 39 |
| Authenticity: | 4, 12*, 20, 28*, 36 | Experimentation: | 8, 16, 24, 32, 40* |

**Reliability**

The reliability of the scale was found by split half method and coefficient of reliability of the organizational culture profile was found to be 0.7983.
**Validity**

Validity of the scale has been established empirically by taking scores of students regarding organizational culture. The coefficient of validity was calculated from reliability and it worked to be 0.893S. The indices of reliability and validity show that the scale is a reasonably reliable and valid tool to measure organizational culture.

**4.4.8 Organizational Health Inventory**

Organizational Health Inventory of Hoy and Feldman (1987) is a four point Likert type rating scale. The Organizational Health Inventory contains forty four statements, whereas in the present study only twenty one statements are considered which cover all the seven elements of school health. They are:

(i) Institutional integrity  
(ii) Principal influence  
(iii) Consideration  
(iv) Initiating structure  
(v) Resource support  
(vi) Morale  
(vii) Academic emphasis
Institutional integrity is the school's ability to cope with its environment in a way that maintains the educational integrity of its programme. Teachers are protected from unreasonable community and parental demands.

Principal influence is the principal's ability to influence the actions of superiors. Being able to persuade superiors to get additional consideration and not to be impeded by the hierarchy are important aspects of school administration.

Consideration is principal behaviour that is friendly, supportive, open and collegial; it represents a genuine concern on the part of the principal for the welfare of the teachers.

Initiating structure is principal behaviour that is both task and achievement oriented. Work expectations, standards of performance and procedures are clearly articulated by the principal.

Resource support refers to a school where adequate classroom supplied and instructional materials are available and extra materials are readily supplied if requested.

Morale is a collective sense of friendliness, openness, enthusiasm and trust among faculty members. Teachers like each other, like their jobs and
help each other and they are proud of their school and feel a sense of accomplishment in their jobs.

Academic emphasis is the extent to which the school is driven by a quest for academic excellence. High but achievable academic goals are set for students. The learning environment is orderly and teachers believe in their students' ability to achieve. Students work hard and respect those who do well academically.

Thus, institutional integrity serves as an indicator of health at the institutional level. Principal influence, consideration, initiating structure and resource support provide measures of the health of the managerial system. Morale and academic emphasis are the indices of health at the technical level. The scoring scheme of the tool is of 4 anchoring points (4, 3, 2, 1) and revere scoring was adopted for negative items.

Reliability and Validity

Test-retest reliability was computed for the Inventory and it worked out to be 0.67. The validity of the tool was measured by the index of reliability and it was 0.81.

The construct validity was established by factor analysis by Hoy and Feldman.
Table-4.1: Description of the Tools

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Tool</th>
<th>Dimensions</th>
<th>Total Statements</th>
<th>Items Under each Dimension</th>
<th>Sl.No. of Negative Items</th>
<th>Scoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Behaviour Adjustment in School Inventory</td>
<td>3</td>
<td>34</td>
<td>A = 12</td>
<td>1, 2, 3, 5, 11, 13, 16, 17, 19, 21, 22, 24, 25, 26, 27 &amp; 33</td>
<td>Yes = 1 No = 0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B = 15</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>C = 07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Kozeki’s Motivational Inventory</td>
<td>3</td>
<td>18</td>
<td>6</td>
<td>1, 2, 4, 6, 7, 1, 12, &amp; 18</td>
<td>Yes = 1 No = 0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Students’ Involvement Questionnaire</td>
<td>4</td>
<td>16</td>
<td>4</td>
<td>12</td>
<td>4 anchoring points</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(4, 3, 2 &amp; 1)</td>
</tr>
<tr>
<td>4.</td>
<td>Personal Effectiveness Scale</td>
<td>3</td>
<td>15</td>
<td>3</td>
<td>11</td>
<td>5 anchoring points</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(4, 3, 2, 1, 0)</td>
</tr>
<tr>
<td>5.</td>
<td>Classroom Climate Questionnaire</td>
<td>3</td>
<td>24</td>
<td>8</td>
<td>Nil</td>
<td>4 anchoring points</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(4, 3, 2 &amp; 1)</td>
</tr>
<tr>
<td>6.</td>
<td>School Atmosphere Questionnaire</td>
<td>4</td>
<td>20</td>
<td>5</td>
<td>8, 9, 12, 13, 18, 19 &amp; 20</td>
<td>4 anchoring points</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(4, 3, 2 &amp; 1)</td>
</tr>
<tr>
<td>7.</td>
<td>Organizational Culture Profile</td>
<td>8</td>
<td>40</td>
<td>5</td>
<td>12,14,22,23,25,26,28,30,31,40</td>
<td>4 anchoring points</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(4, 3, 2 &amp; 1)</td>
</tr>
<tr>
<td>8.</td>
<td>Organizational Health Inventory</td>
<td>7</td>
<td>21</td>
<td>3</td>
<td>2, 3, 6 &amp; 18</td>
<td>4 anchoring points</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(4, 3, 2 &amp; 1)</td>
</tr>
</tbody>
</table>

Note: 1. Except the negative items mentioned in the above table, all other items are positive.
2. Reverse scoring was adopted for negative items.

4.5 Academic Achievement

To assess the academic achievement the percentage of results of the public examination of the Standard VII for the past five years were obtained by personally visiting the schools by the investigator. The percentage of average results of five years was considered in the study. The list of schools visited is presented in Appendix-9.
4.6 Sample

The population of the sample of Hubli-Dharwad Corporation area numbering up to 45 formed the sample of the study. The data was collected from schools giving due consideration to the type of management and type of schools. Government schools, aided schools and private schools were selected. Out of these 10 were boys schools, 12 girls schools and 23 co-education schools.

From each school data was collected from ten students and six teachers selected at random. In all, the data was collected from 45 schools – 450 students, 270 teachers and 45 Heads of schools. This is presented in Table-4.2.

<table>
<thead>
<tr>
<th>Table-4.2: Sample for the Present Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Schools</td>
</tr>
<tr>
<td>No. of Schools</td>
</tr>
<tr>
<td>No. of Teachers</td>
</tr>
<tr>
<td>No. of Students</td>
</tr>
</tbody>
</table>
4.7 Data Collection

Data was collected from students, teachers and the Heads of schools. The investigator personally visited the 45 schools of Hubli-Dharwad Corporation area and with the prior permission of the Heads of schools, administered the tools to ten students of standard VII and five experienced teachers in each school and to the Heads. Clear cut instruction were given to fill up the tools.

All the students were administered the following tools:

1. Behaviour Adjustment in School Inventory
2. Kozeki's Motivational Inventory
3. Students' Involvement in School Activities
4. Personal Effectiveness Scale

The teachers were administered the following tools:

5. Classroom Climate
6. School Atmosphere Questionnaire
7. Organizational Health Inventory

The Heads of schools were administered the following tool:

8. Organizational Culture Profile
4.8 Data Analyses

For the analysis of data collected, descriptive, differential statistics analysis, and multivariate statistics, such as mean, standard deviation, correlation analysis, ANOVA, t-test, regression analysis and discriminant function analysis were used.

4.9 Conclusion

In the present normative survey study the correlations of effective schools at the primary school level was investigated by selecting 450 students, 225 teachers and 45 Heads of schools of Hubli-Dharwad Corporation area. The tools were used to collect the relevant information both from students and teachers.

The succeeding chapter spells out the details of the data analyses.