CHAPTER -IV

RESEARCH

PROCEDURE
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4.1 Introduction

A research 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 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 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 normative survey (ex-post-facto) type 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 table 4.1.
<table>
<thead>
<tr>
<th>Multipurpose Regression</th>
<th>Assessment Scale</th>
<th>Education College</th>
<th>Secondary Teacher</th>
</tr>
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<td></td>
<td></td>
<td>Education College</td>
<td>46 Teacher Education College</td>
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<tr>
<td></td>
<td></td>
<td>Inservice Education Scale</td>
<td>55 Teacher Education College</td>
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<td>Secondary Teacher</td>
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<tr>
<td></td>
<td></td>
<td>Performance Appraisal</td>
<td>Secondary Teacher</td>
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<tr>
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<td>Secondary Teacher</td>
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<td>Secondary Teacher</td>
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<td>Secondary Teacher</td>
<td></td>
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</tr>
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<td>Secondary Teacher</td>
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<table>
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<td>Human Resource</td>
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<td>Human Resource</td>
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</table>

<table>
<thead>
<tr>
<th>Multiple Regression and Correlational Statistics Used</th>
<th>Tools Used</th>
<th>Variable Studied</th>
</tr>
</thead>
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<td>Tools Used</td>
<td>Variable Studied</td>
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<tr>
<td>Multiple Regression and Correlational Statistics Used</td>
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<td>Multiple Regression and Correlational Statistics Used</td>
<td>Tools Used</td>
<td>Variable Studied</td>
</tr>
</tbody>
</table>

Table 4.1 Research Design
4.3 Hypotheses

Hypothesis 1
Teacher educators belonging to different age groups differ in their perception of human resource development climate.

Hypothesis 2
Teacher educators belonging to different age groups differ in their perception of performance appraisal.

Hypothesis 3
Teacher educators belonging to different age groups differ in their perception of in-service education.

Hypothesis 4
Teacher educators belonging to different age groups differ in their perception of secondary teacher educators training needs and its sub components viz.,

a) instructional planning and preparation
b) subject matter competence
c) teaching competence
d) classroom management competence
e) institutional management
f) community service
   i) academic
ii) social

  g) professional self-development

  h) general awareness.

Hypothesis 5

  Teacher educators belonging to different gender differ in their perception of human resource development climate.

Hypothesis 6

  Teacher educators belonging to different gender differ in their perception of performance appraisal.

Hypothesis 7

  Teacher educators belonging to different gender differ in their perception of in-service education.

Hypothesis 8

  Teacher educators belonging to different gender differ in their perception of secondary teacher educators training needs and its sub components viz.,

  a) instructional planning and preparation

  b) subject matter competence

  c) teaching competence

  d) classroom management competence

  e) institutional management
Hypothesis 9

Teacher educators with different designations (Lecturers/ Senior Lecturers) differ in their perception of human resource development climate.

Hypothesis 10

Teacher educators with different designations (Lecturers/ Senior Lecturers) differ in their perception of performance appraisal.

Hypothesis 11

Teacher educators with different designations (Lecturers/ Senior Lecturers) differ in their perception of in-service education.

Hypothesis 12

Teacher educators with different designations (Lecturers/ Senior Lecturers) differ in their perception of secondary teacher educator training needs and its sub components viz.,

a) instructional planning and preparation

b) subject matter competence
c) teaching competence

d) classroom management competence

e) institutional management

f) community service

i) academic

ii) social

g) professional self-development

h) general awareness

**Hypothesis 13**

Teacher educators of arts and science groups differ in their perception of human resource development climate.

**Hypothesis 14**

Teacher educators of arts and science groups differ in their perception of performance appraisal.

**Hypothesis 15**

Teacher educators of arts and science groups differ in their perception of in-service education.

**Hypothesis 16**

Teacher educators of arts and science groups differ in their perception of secondary teacher educators training needs and its sub components viz.,
a) instructional planning and preparation
b) subject matter competence
c) teaching competence
d) classroom management competence
e) institutional management
f) community service i) academic
   ii) social
g) professional self-development
h) general awareness

Hypothesis 17

Teacher educators with and without in-service education differ in their perception of human resource development climate.

Hypothesis 18

Teacher educators with and without in-service education differ in their perception of performance appraisal.

Hypothesis 19

Teacher educators with and without in-service education differ in their perception of in-service education

Hypothesis 20

Teacher educators with and without in-service education differ in their perception of secondary teacher educators training needs and its sub components viz.,
a) instructional planning and preparation  
b) subject matter competence  
c) teaching competence  
d) classroom management competence  
e) institutional management  
f) community service  
i) academic  
ii) social  
g) professional self-development  
h) general awareness  

Hypothesis 21

Teacher educators working in different types of management (Government, Private aided- Private unaided) differ in their perception of human resource development climate.

Hypothesis 22

Teacher educators working in different types of management (Government, Private aided- Private unaided) differ in their perception of performance appraisal.

Hypothesis 23

Teacher educators working in different types of management (Government, Private aided- Private unaided) differ in their perception of in-service education.
**Hypothesis 24**

Teacher educators working in different types of management (Government, Private aided- Private unaided) differ in their perception of secondary teacher educators training needs and its sub components viz.,

a) instructional planning and preparation
b) subject matter competence
c) teaching competence
d) classroom management competence
e) institutional management
g) community service
   i) academic
   ii) social
g) professional self- development
h) general awareness

**Hypothesis 25**

Teacher educators working in different types of colleges (Unisex and Co education) differ their perception of human resource development climate

**Hypothesis 26**

Teacher educators working in different types of colleges (Unisex and Co education) differ in their perception of performance appraisal.
Hypothesis 27

Teacher educators working in different types of colleges (Unisex and Co education) differ in their perception of in-service education.

Hypothesis 28

Teacher educators working in different types of colleges (Unisex and Co education) differ in their perception of secondary teacher educators training needs and its sub components viz.,

a) instructional planning and preparation
b) subject matter competence
c) teaching competence
d) classroom management competence
e) institutional management
f) community service
   i) academic
   ii) social
g) professional self-development
h) general awareness

Hypothesis 29

Principals and teacher educators differ in their perception of human resource development climate.
Hypothesis 30

Principals and teacher educators differ in their perception of performance appraisal.

Hypothesis 31

There is significant relationship between human resource development climate and

1. performance appraisal
2. in-service education
3. secondary teacher educators training needs and its sub components viz.,
   a) instructional planning and preparation
   b) subject matter competence
   c) teaching competence
   d) classroom management competence
   e) institutional management
   f) community service
      i) academic
      ii) social
   g) professional self-development
   h) general awareness.
4.4 Tools

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

4.4.1 Human Resource Development Climate Questionnaire

This questionnaire developed and standardized by Rao and Abraham (1990) at the Xavier’s Labour Relations Institution, Jamshedpur Centre (XLRI). It consists of thirty eight items to be responded on a five point scale as 4- almost always true, 3-mostly true, 2-sometimes true, 1-rarely true, 0-not at all true.

The investigator has modified the tool and reduced the number of items to thirty-five. This questionnaire has been revalidated by calculating validity and reliability coefficients. It was administered to all teacher educators and principals of teacher education college.

The details regarding the items are given in table 4.2.

**Table 4.2: Human Resource Development Climate Questionnaire**

<table>
<thead>
<tr>
<th>Components</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Resource Development Questionnaire</td>
<td>35</td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
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</table>
Reliability and Validity

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 0.71. The validity was established by taking the square root of reliability and it was 0.87. Thus this tool is found to be reliable and valid.

4.4.2 Performance Appraisal Effectiveness Questionnaire

Performance appraisal effectiveness questionnaire is developed and standardized by Rao and Abraham (1990) at the XLRI Centre. It consists of two parts and 33 items to be responded on a five-point scale as.

0- to those items that you think are totally false.

1- to those items that are slightly true or true to little extent (25% true, 75% false).

2- to those items that are somewhat true (50% true and 50% false).

3- to those items that are mostly true (75% true)

4- to those items that are completely true.

The investigator has modified the tool and reduced the number of items to twenty five. This questionnaire has been revalidated by the calculating validity and reliability coefficients. The PAEQ has two parts Part-I was administered to all teacher educators and principals of teacher education colleges. PAEQ-II part I was administered to teacher educators.
The details regarding the components and number of items given in table 4.3.

Table 4.3: Performance Appraisal Effectiveness Questionnaire

<table>
<thead>
<tr>
<th>Components</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Appraisal Effectiveness Questionnaire Part I</td>
<td>12</td>
</tr>
<tr>
<td>Performance Appraisal Effectiveness Questionnaire Part II</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>25</strong></td>
</tr>
</tbody>
</table>

Reliability and Validity

Test-retest reliability was computed for the questionnaire and it worked out to be 0.73. The validity of the tool was measured by square root of reliability and it was 0.84. Thus this tool is found to be reliable and valid.

4.4.3 In-service Education Scale

In-service education Scale (Training Effectiveness Questionnaire) is developed and standardized by Rao and Abraham (1990) at the XLRI Centre. It consists of twenty-five items to be responded on a five point scale as.

0- not at all true.
1- a little true.
2- somewhat true
3- true to a great extent,
4- very true
The investigator has modified the tool and reduced the number of items of 22.

The details regarding in-service education scale and number of items are given in table 4.4.

Table 4.4: In-service Education Scale

<table>
<thead>
<tr>
<th>Components</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-service Education Scale</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
</tr>
</tbody>
</table>

This scale has been revalidated by the calculating validity and reliability coefficients. It was administered to all teacher educators of teacher education colleges.

Reliability and Validity

The researcher established the reliability of the tool by test retest method and the correlation between two tests worked out to be 0.58. The validity of the tool was measured by computing square root of reliability and it was 0.76. Thus tool is found to be reliable and valid.

4.4.4. Secondary Teacher Educators Training Needs Assessment Scale

Secondary teacher educators training needs assessment scale is developed and standardized by Nilavar (1992). It consists of 214 items to be responded on
a four point scale as 1- to very great extent 2- to a satisfactory extent 3- to some extent.4- to a very little extent.

The investigator has modified the tool and reduced the number of item to 90. This assessment scale (Rating Scale) has been revalidated by calculating validity and reliability coefficients. It was administered to all teacher educators of teacher education colleges.

The details regarding eight dimensions and number of items under each are given in table 4.5.

Table 4.5: Secondary Teacher Educators Training Need Assessment Scale and Its Dimensions

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Instructional planning and preparation (IPAP)</td>
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</tr>
<tr>
<td>II Subject matter competence (SMC)</td>
<td>04</td>
</tr>
<tr>
<td>III Teaching competence (T.C.)</td>
<td>17</td>
</tr>
<tr>
<td>IV Classroom management competence (CRMC)</td>
<td>09</td>
</tr>
<tr>
<td>V Institutional management (I.M)</td>
<td>10</td>
</tr>
<tr>
<td>VI Community service (A) academic (A.C)</td>
<td>06</td>
</tr>
<tr>
<td>(B) Social (SO)</td>
<td>04</td>
</tr>
<tr>
<td>VII Professional self development (P.S.D)</td>
<td>13</td>
</tr>
<tr>
<td>VIII General awareness</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>90</strong></td>
</tr>
</tbody>
</table>
Reliability and Validity

In the present study the reliability of the tool was established by test retest method and the correlation between the two tests worked out to be 0.72. The validity was established by taking the square root of reliability and it was 0.86. Thus this tool is found to be reliable and valid.

4.6 Sample

The data for the study were gathered using a sample of 426 teacher educators, 48 principals randomly selected from 55 colleges of secondary teacher educators out of 69 secondary teacher education colleges coming under six universities in Karnataka. The teacher educators and principals were selected from each college giving due representation to the age, gender, subject, designation, with and without in-service education, type of management and type of college. The table 4.6 given below furnishes the details of the sample selected.
Table 4.6 Details of Sample Selected

<table>
<thead>
<tr>
<th>Universities</th>
<th>AID</th>
<th>UNAID</th>
<th>GOVT</th>
<th>GOVT Unsex Education</th>
<th>Co-education</th>
<th>Male Principals</th>
<th>Female Principals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kuvempu</td>
<td>19</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Gulburga</td>
<td>29</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Mangalore</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>1</td>
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<td>1</td>
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<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
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</tbody>
</table>
4.7 Data Collection

The investigator personally collected the data from 55 teacher education colleges out of 69 teacher education colleges affiliated to six universities in Karnataka State namely Karnataka university, Bangalore University, Mysore University, Mangalore University, Gulburga University and Kuvempu University. Principals and individual teacher educators were personally administered the tools. Clear-cut instructions were given to fill up the responses to the items in the tools. The filled in proformas were collected.

4.8 Data Analyses

For the analyses of data collected, descriptive, differential, correlation, and multiple regression statistics were used.

The succeeding chapter spells out the details of data analyses.