CHAPTER - III
RESEARCH DESIGN

3.1 Introduction

The methodology which is the axle of the research work was dealt in this chapter. This chapter gives details about research design, sample, tool constructed and selected for the present study.

3.2 Research Design

3.2.1 Methods and its procedures

The investigator adopted the Cross- Sectional Survey method for the present study and used three tools. Out of the three tools one tool viz., Teacher Computer Self- Efficacy Scale was developed and validated by the investigator in the form of questionnaire. Emotional Quotient Inventory developed by Reuven Bar-On and translated in Tamil by Dr R. Alavandar was used. The items figured in the questionnaire were verified with the help of subject experts.

The tools were distributed to 425 trainees of Pudukkottai District who were selected randomly. These trainees were from Elementary Teacher Educational Institutions viz., DIET TTIs of Pudukkottai district. Among them 407 teachers responded completely. Data collected from 407 teachers were analyzed by appropriate statistical method.
Chapter III
Research Design

Phase-I
Identification

Identification of Problem

Identification of Sample

Phase-II
Construction / Selection of Tool

Collection of the items

Getting experts’ opinion

Finalization of the tool

Phase-III
Implementation

Selection of the sample

Collection of the data

Phase-IV
Evaluation

Analysis of data

Interpretation of results of analysis

Research findings

Research report preparation

Emotional Intelligence of DTEd Trainees of Pudukkottai District
3.2.2 Identification of the problem

In twenty-first century every nation is concentrating on Knowledge Management. Managing the human behavior makes the individual a holistic one and a more productive asset of his/her nation. So each and every nation is planning and implementing activities in order to make its citizen a knowledgeable as well as emotionally balanced person. In India also, various measures legally, demonstratively and academically have been taken to provide quality education helping the situation in day to activities in all levels and in primary / elementary education in particular. But the reaching of the goals of primary / elementary education depends on the teacher's characteristics viz., Emotional Intelligence towards organization, job, students, community etc. The present study is undertaken with a view to find out whether teachers' emotional intelligence is influenced by the variables namely Academic Achievement and Computer Self Efficacy.

3.2.3 Identification of Institutions

It was decided to conduct the study by the researcher on Teachers' Emotional Intelligence with respect to their Academic Achievement and Computer Self Efficacy by selecting randomly Elementary Teacher Educational Institutions functioning under different types of management in Pudukkottai District.

3.3 Development of Teacher Computer Self Efficacy Scale (TCSES)

The items for the Development of Teacher Computer Self Efficacy Scale (TCSES) were drawn from various sources like personal interviews conducted with
teachers and discussion with experts in the field of Educational Technology and the
review of related literature.

3.3.1 Factors of Teacher Computer Self Efficacy Scale (TCSES)

Items selected for Teacher Computer Self Efficacy Scale (TCSES) consisted of
the following factors.

General Operation of Computer

Teacher should have the efficacy in handling the Computer. He / She should
know the fundamental operations of computer. Teacher should have efficacy in
selecting, installing application software for effective classroom transaction. He /
She should have the skill of copying, saving and editing the files in the computer so
that he/she can adopt the computer for his classroom activities.

Word Processing

The teacher has to keep the documents for his/her classroom. He / She
should know how to create a word document in the computer. He / She should
know how to edit the word document by incorporating border, tables, objects, etc.,
formatting, using find /replace commands etc. Therefore teacher should have
efficacy in handling the word processor for effective classroom transaction.

Spreadsheets / Excel

To understand students’ progress teacher has to handle some data. Handling
data in a computer saves much time to the teacher and also serves as a ready
reckoner. Teacher should know how to enter data in spreadsheet and do simple
mathematical calculations and drawing graphs and editing excel spreadsheets and files. Hence teacher should have efficacy of handling Excel Spreadsheets.

**PowerPoint Presentation**

Teaching should maximize the learning among the learners. To make teaching lively teacher should use appropriate PowerPoint presentation. It demands the skill of creation of slide, insertion of slide, editing of slides by inserting objects, tables, graphs, pictures etc., formatting the presentation, doing animation etc., Hence teacher should have efficacy of preparing and applying PowerPoint Presentation for effective classroom transaction

**Internet**

Today online education has entered into the field of education. Anyone can access his area of study by the concept anywhere at any time. In the present technologically advanced era, teacher should know how to do some fundamentals operations related to internet such as creation of e-mail id, browsing of mail, sending mails to others with attachment and non attachments, browsing the relevant material without compromising time management, helping the students to use the search engine effectively etc., Hence teacher should have efficacy of handling Internet for his/her classroom transaction in general and online education in particular.

**Classroom Process**

Computer Assisted Teaching, Leaning, and Management have entered in the teaching leaning process. Managing the process makes the system more successful. Teacher should know how to use the Word, Excel, PowerPoint, Internet etc.
effectively in the classroom. Hence teacher should have efficacy of managing the 
computer aided learning process.

3.3.2 Scrutiny and Evaluation of Items

Keeping in view the above six factors, 170 items in total, 30 items under 
General Computer Operations, 25 items under Word Processing, 35 items under 
Spreadsheet / Excel, 30 items under PowerPoint, 25 items under using Internet / 
Web and 25 items under Teaching- Learning through Computer were pooled. 
These items were subjected to a more careful scrutiny. The items which seemed to 
overlap with one another were critically examined. An item conveying the 
objectives of the tool was retained and care was taken to maintain the language of 
the items simple and meaningful. This process of scrutiny and evaluation finally 
yielded 165 items.

3.3.3 Evaluation of Items by Expert

In order to establish whether a given item really belongs to that particular 
factor, the items were arranged in a random order and subjected to expert scrutiny. 
The experts were drawn from the field of Primary / Elementary Education (faculty 
from DIET and University Department). In order to facilitate the experts judging the 
items, they were presented with operational definition of factors. The experts were 
asked to indicate whether items were clearly stated and easily understood by the 
teachers and to suggest necessary modification if any. The items of the scale had 
two categories of responses, viz., Yes and No This process finally yielded 163 
items.
3.3.4 Administration of Items

The Teacher Computer Self Efficacy Scale (TCSES) thus developed was given to a sample of 100 teacher trainees and 100 teachers of Pudukkottai District. The investigator explained the objectives of the study to the trainees and teachers and asked them to rate appropriately in one of the two response categories against each item. Trainees and teachers were asked to mark every item without omitting anyone. No time limit was imposed. The filled in Teacher Computer Self Efficacy Scales were scored in the order of ‘1’, ‘0’ for the responses, yes and no. Scores obtained by each individual were summed up and used for further analysis.

3.3.5 Item Analysis

In order to select the valid items for the final study, t value was calculated using the formula suggested by Edward (1957).

$$t = \frac{X_H - X_L}{\frac{S_H^2}{N} + \frac{S_L^2}{N}}$$

where

- $X_H$ is the mean score of the upper group on a given statement
- $X_L$ is the mean score of the lower group on a given statement
- $S_H^2$ is the variance of distribution of response of upper group to the statement
- $S_L^2$ is the variance of distribution of response of lower group to the statement
- $N$ is the number of subjects in the upper group / lower group.
The t value of the Teacher Computer Self Efficacy Scale (TCSES) ranged from 4.135 to 53.000. Items which are significant at 0.001 level and t value equal and greater than 3.400 were selected for final scale. Following the criteria stated above, 66 items were selected. Since the factors of TCSES are well defined the six dimensions of Teacher Computer Self Efficacy viz., General Computer Efficacy, Word Processing Efficacy, Spreadsheets / Excel Efficacy, PowerPoint Presentation Efficacy, Internet Efficacy and Computer in Classroom Process Efficacy are considered as it is, in the final scale.

3.3.6 Reliability of Teacher Computer Self Efficacy Scale (TCSES)

The reliability of Teacher Computer Self Efficacy Scale (TCSES) was established by calculating Cronbach alpha and inter-observer method. An inter-rater reliability analysis using the Kappa statistic was performed to determine consistency among raters. The calculated value is 0.85 that shows substantial agreement (Landis & Koch, 1977). The Cronbach alpha value for each factor and total are as shown in the table 3.1.
Table 3.1
Reliability Coefficient of Teacher Computer Self Efficacy Scale (TCSES)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of the Factor</th>
<th>Item Numbers</th>
<th>No. of items</th>
<th>Cronbach alpha value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>General Computer Efficacy</td>
<td>1*, 2*, 9, 18, 21, 28, 35, 47*, 53, 58*, 65*</td>
<td>11</td>
<td>0.9738</td>
</tr>
<tr>
<td>2.</td>
<td>Word Processing Efficacy</td>
<td>2, 7, 16*, 23, 26*, 36, 41*, 48*, 51, 59, 64*</td>
<td>11</td>
<td>0.9729</td>
</tr>
<tr>
<td>3.</td>
<td>Spreadsheets / Excel Efficacy</td>
<td>3*, 8, 17, 22*, 25*, 32, 42, 44, 52, 55, 63*</td>
<td>11</td>
<td>0.9832</td>
</tr>
<tr>
<td>4.</td>
<td>PowerPoint Presentation Efficacy</td>
<td>12, 15*, 24*, 27*, 31, 39, 40*, 43, 50*, 60, 62*</td>
<td>11</td>
<td>0.9843</td>
</tr>
<tr>
<td>5.</td>
<td>Internet Efficacy</td>
<td>6, 11*, 14*, 19, 30*, 34, 38*, 46, 49*, 57, 66*</td>
<td>11</td>
<td>0.9720</td>
</tr>
<tr>
<td>6.</td>
<td>Computer in Classroom Process Efficacy</td>
<td>5, 10*, 13*, 20, 29, 33*, 37*, 45, 54*, 56, 61*</td>
<td>11</td>
<td>0.9768</td>
</tr>
<tr>
<td></td>
<td>All factors combined</td>
<td></td>
<td><strong>66</strong></td>
<td><strong>0.9959</strong></td>
</tr>
</tbody>
</table>

* Negative items

Thus from the two coefficients, it may be concluded that the Teacher Computer Self Efficacy Scale (TCSES) is highly reliable.

3.3.7 Validity of Teacher Computer Self Efficacy Scale (TCSES)

The validity of the tool was established by circulating the tool to the expert in the field. The intrinsic validity was established by taking the square root of the reliability coefficient. The reliability coefficient is 0.9959 and hence the intrinsic validity is 0.9979. Thus, it may be concluded that the Teacher Computer Self Efficacy Scale (TCSES) is highly valid.
3.3.8 Finalization of Teacher Computer Self Efficacy Scale (TCSES)

The final version of the Teacher Computer Self Efficacy Scale (TCSES) was designed with the 66 valid items. This scale is a Likert Type five point scale (Strongly Agree, Agree, Undecided, Disagree, and Strongly Disagree). In the case of positive items, the scoring is ‘5’, ‘4’, ‘3’, ‘2’, and ‘1’ for Strongly Agree, Agree, Undecided, Disagree, and Strongly Disagree respectively. In the case of negative items, the scoring is ‘5’, ‘4’, ‘3’, ‘2’, and ‘1’ for Strongly Disagree, Disagree, Undecided, Agree, and Strongly Agree respectively. The maximum possible score is 330 and the minimum is 66. The highest score indicates the existence of high Computer Self Efficacy among trainees.

3.4 Selection of Emotional Quotient Inventory (EQI)

The Emotional Quotient Inventory was developed by Reuven Bar-On to measure emotional (or non-cognitive) intelligence. This tool is the first scientifically developed and validated measure of emotional intelligence. It measures one’s ability to deal with daily environmental pressures and demand. The Bar-On Emotional Quotient Inventory assessment highlights the emotional and social strengths and weaknesses that affect how an individual performs and interacts with an institution. This tool is a self-report questionnaire consisting of 66 items. There are five response categories ranging from ‘not true’, ‘seldom true’, ‘sometimes true’, ‘often true’ and ‘true’.
3.4.1 Factors of Emotional Quotient Inventory (EQI)

The selected tool to measure the Emotional Intelligence has ten dimensions. The total number of items in the tool is 66. The Table 3.2 shows the dimensions and their corresponding items in the tool. The total score of all the 66 items yield the total Emotional Quotient Score of a person.

Table 3.2
Factors of Emotional Quotient Inventory (EQI)

<table>
<thead>
<tr>
<th>Factors</th>
<th>Item number</th>
<th>Total No. of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Regard (SR)</td>
<td>6, 12*, 21, 27*, 36*, 43, 51, 56, 64</td>
<td>9</td>
</tr>
<tr>
<td>Inter Personal Relationship (IR)</td>
<td>15, 20, 31,35*,50,55,63*</td>
<td>7</td>
</tr>
<tr>
<td>Impulse Control (IC)</td>
<td>7*, 38*, 44*, 58*, 65*</td>
<td>5</td>
</tr>
<tr>
<td>Problem Solving (PS)</td>
<td>1,9,14,23,29,46</td>
<td>6</td>
</tr>
<tr>
<td>Emotional Self –Awareness (ES)</td>
<td>3,5,11*,17*,25*,57*</td>
<td>6</td>
</tr>
<tr>
<td>Flexibility (FL)</td>
<td>8*,13*,22*,28,39,45*,52*,66*</td>
<td>8</td>
</tr>
<tr>
<td>Reality Testing (RT)</td>
<td>4,19*,26*,34*,42*,48*</td>
<td>6</td>
</tr>
<tr>
<td>Stress Tolerance (ST)</td>
<td>2,10,16,24*,32*,40,53,60*</td>
<td>8</td>
</tr>
<tr>
<td>Assertiveness (AS)</td>
<td>18,33*,41*,47*,54*,62*</td>
<td>6</td>
</tr>
<tr>
<td>Empathy (EM)</td>
<td>30, 37, 49, 59, 61</td>
<td>5</td>
</tr>
</tbody>
</table>

* Negative items

3.4.2 Administration of Emotional Quotient Inventory (EQI)

Instructions for administration given are as follows: ‘This inventory consists of series of statements which follow five response categories. Read each item
carefully and decide how it describes you in the given point scale and indicate your choice by circling the corresponding number in the (separate) answer sheet. There is no right or wrong answers and there is no time limit. Work rapidly and give your immediate response to each item’.

3.4.3 Scoring of Emotional Quotient Inventory (EQI)

The responses should be scored as per the scoring key given in Table 3.3.

**Table 3.3**

<table>
<thead>
<tr>
<th>Response</th>
<th>Score for Positive Item</th>
<th>Score for Negative Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not True</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Seldom True</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Some Times True</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Often True</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>True</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

3.4.4 Reliability of Emotional Quotient Inventory (EQI)

The Emotional Quotient Inventory was found to have a high degree of reliability (Bar-On, 1997). Based on seven population samples, the internal consistency coefficients for the Emotional Quotient Inventory subscales were analyzed. The average Cronbach Alpha Coefficients were high for all of the subscales, ranging from 0.69 to 0.86 with an overall average internal consistency...
coefficient of 0.76. Further test-retest reliability studies indicated that there was consistency in the findings from one administration to the next. One month and four month test and retest reliability studies indicated that there was consistency in the findings from 0.78 to 0.92 and 0.55 to 0.82. These findings reveal that the Emotional Quotient Inventory is highly reliable.

3.4.5 Validity of Emotional Quotient Inventory (EQI)

Bar-On established the validity of this tool by conducting studies in six different countries (India is one of the six different countries). This tool possesses content validity and face validity. Further, the convergent validity of the tool was found to be 0.57. The divergent validity of the tool was 0.12 with an intelligence scale. Moreover, the criterion group validity was established as 0.819. These values indicate that the tool is highly valid.

3.4.6 Validation of Emotional Quotient Inventory (EQI)

Bar-On’s Emotional Quotient Inventory was translated into Tamil so that the teacher trainees at elementary level could easily understand it. The translated version was reviewed by three experts and their suggestions incorporated. As many as 100 teachers were randomly selected from schools (both primary and middle) belonging to cluster resource centres in Cuddalore block for the pilot study. It was personally administered on the teachers. All the responses were quantified and computer analyzed. The Cronbach Alpha reliability was found to be 0.9102. By Split- half method, the reliability was high as 0.8892. Using the Spearman – Brown Prophecy formula the reliability for the whole test was calculated to be 0.889.
3.5 Pilot Study

In order to find out the feasibility of the study, pilot study was conducted. In the pilot study 25 male and 25 female trainees of elementary teacher educational institutions were used.

The investigator distributed the tools to the trainees and instructed the importance of the study and their functions in this pilot study. It was found that tools had no difficulty in answering the questions. Therefore it was decided to use the tools in the final study without making any corrections.

3.6 Sample

A sample is a representative of the population selected for analysis.

3.6.1 Selection of the sample

The investigator decided to collect data from trainees pursuing Diploma in Teacher Education in Elementary Teacher Educational Institutions of Pudukkottai Revenue District. There were 4001 trainees studying in the Government and Self financed Private Elementary Teacher Educational Institutions of Pudukkottai District during 2008-10. There were 32 Government Unaided Elementary Teacher Educational Institutions and one DIET in Pudukkottai District.
Table 3.4
Distribution of the Sample

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>Number</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Admission</td>
<td>Single Window System</td>
<td>233</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Management Quota</td>
<td>174</td>
<td></td>
</tr>
<tr>
<td>Type of Administration</td>
<td>DIET</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TTI</td>
<td>348</td>
<td></td>
</tr>
<tr>
<td>Type of Staying</td>
<td>Hosteller</td>
<td>169</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Days Scholar</td>
<td>238</td>
<td></td>
</tr>
<tr>
<td>Plus two school - Type of Management</td>
<td>Government Schools</td>
<td>280</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Government Aided Schools</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Government Unaided Schools</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>Plus two school - Type of School</td>
<td>Boys</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>204</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Co-Educational</td>
<td>168</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>79</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>328</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>Below 21 years</td>
<td>307</td>
<td></td>
</tr>
<tr>
<td></td>
<td>21 and Above 21 Years</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Community</td>
<td>MBC</td>
<td>136</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BC</td>
<td>107</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SC &amp; ST</td>
<td>161</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FC</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Type of Family</td>
<td>Single</td>
<td>263</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Joint Family</td>
<td>144</td>
<td></td>
</tr>
<tr>
<td>Father as Government Servant</td>
<td>Yes</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>358</td>
<td></td>
</tr>
<tr>
<td>Mother as Government Servant</td>
<td>Yes</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>384</td>
<td></td>
</tr>
</tbody>
</table>
Chapter-III

Research Design

The population of the present study was 4001. Out of 4001 trainees, 425 trainees alone were selected by adopting simple random sampling technique. Out of the 425 teacher trainees, 407 numbers of respondents returned the tools in complete form. Hence the sample for the present study was 407. Then the sample was further divided into various categories with respect to Institutional variables, Biological Variable, Social Valuable and Economic Variable Viz., Type of Admission (Single Window System, Management Quota), Type of Administration (DIET, TTI), Type of Staying (Hosteller, Days Scholar), Plus two school - Type of Management (Government School, Government Aided School, Government Unaided School), Plus two school - Type of School (Boys, Girls, Co-Educational), Gender (Male, Female), Age (Equal and above 21 years, Below 21 years), Community (FC, MBC, BC, SC, ST), Type of Family (Single, Joint Family), Father as Government Servant (Yes, No), and Mother as Government Servant (Yes, No). The distribution of sample was shown in the Table 3.4.

3.7 Collection of Data

Collection of data involves the collection of relevant data to the problem under the study. The data were collected by the investigator from the trainees of Elementary Teacher Educational Institutions by using the tools developed and selected, and a tool providing the personal information of the subject.

In order to fill-up the tools, the investigator handed over the copies of sets of tools to the trainees in person after getting permission from the Correspondent or head of the Elementary Teacher Educational Institutions. The investigator instructed the trainees to fill-up their bio-data and read the statements one by one by marking
tick mark (✓) in anyone cell of the five responses. When duly filled sets of tools were ready, the investigator received them from trainees. For this present study data were collected from 407 trainees.

3.8 Scoring of EQI, TCSES

These are 66 items in Emotional Quotient Inventory and 66 items in Teacher Computer Self Efficacy Scale. The EQI scales were scored in the order of ‘0’, ‘1’, ‘2’, ‘3’ and ‘4’ for the responses ‘not true’, ‘seldom true’, ‘sometimes true’, ‘often true’ and ‘true’ for the positively worded items. The scoring procedure was reversed for negatively worded items. The TCSE scale was scored in the order of ‘5’, ‘4’, ‘3’, ‘2’ and ‘1’ for the responses ‘Strongly Agree’, ‘Agree’, ‘Disagree’ and ‘Strongly Disagree’ for the positively worded items. The scoring procedure was reversed for negatively worded items. Thus, the total scores ranges between 0 and 264 for EQI, and between 66 and 330 for TCSES. The scale gives composite scores of each level of the subject.

3.9 Collection of Academic Achievement Data

The investigator approached the Principal of District Institute of Education & Training, Pudukkottai who is the officer of the Elementary Teacher Educational Institutions of all kinds of managements functioning in the Revenue District Pudukkottai. The investigator requested the official to provide the result particulars of the District for the year 2008-09 for First year students of DTEd course. From the result particulars provided by the official of the District Institute of Education &
Chapter - III

Training, Pudukkottai, the investigator collected the data of academic achievement of the teacher trainees who were selected for the study.

There are seven academic subjects for whom the trainees appear for both internal and external examinations in both the First Year and Second Year. In the First year the taught courses are ‘Learning Child’, ‘Facilitating & Enhancing Learning I’, ‘Teaching of Tamil I’, ‘Teaching of English I’, ‘Teaching of Mathematics I’, ‘Teaching of Science I’, and ‘Teaching of Social Science I’. In the Second year the taught courses are ‘Indian Education System’, ‘Facilitating & Enhancing Learning II’, ‘Teaching of Tamil II’, ‘Teaching of English II’, ‘Teaching of Mathematics II’, ‘Teaching of Science II’, and ‘Teaching of Social Science II’. In addition to these taught courses trainees appear for only internal examination for eleven subjects. In the present study for academic achievement data were collected from the first year taught courses for which trainees appeared for both internal and external examinations only. The trainee has to get minimum of 50% marks both in internal and external separately for the taught courses. Courses having internal alone grades are being awarded instead of marks. The trainee has to get minimum of Grade ‘C’ which is just above 50%.

Each taught courses has a maximum of 25 internal marks and 100 external marks. Thus in each taught course the maximum marks that could be scored is 125. The total mark for all the seven taught courses in the first year is 825.

3.10 Data analysis

Data were analyzed using appropriate statistical techniques.
3.11 **Statistical Technique**

Mean, Standard Deviation, Carl Pearson Coefficient, Multiple Regression Analysis, 't' Test, and ‘F’ test, were used to analyze the data.

3.12 **Conclusion**

In this chapter the investigator explained the method and its procedure, designs, tools, sampling technique and data collection and statistical technique used in the study. In the next chapter statistical analysis and its interpretation are presented.