CHAPTER - III
DESIGN OF THE STUDY

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. In fact, the research design is the conceptual structure within which research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data. Research design stands for advance planning of the methods to be adopted for collecting the relevant data and the techniques to be used for their analysis keeping in view of the research objectives. Design of the study is an essential part of a research project because it provides a picture of what and how to do the work before starting. It has been determined from time to time that a suitable research design guards against the collection of irrelevant data and grate more economy. So in any research project, design provides the researcher a blueprint of research which dictates the boundaries of project and helps in controlling the experimental, extraneous error, variances of the problem under investigation etc.

The present chapter describes the design or plan of the study and highlights the details about the research procedure followed in conducting the study. As such, it is an important part of the research study and needs to be planned and carried out systematically to arrive at accurate judgments. It includes information about the population, the sampling frame, the nature and form of data collection, tools, methods of collecting data and statistical techniques used for analysis of data etc. In order to achieve the objectives and the stated corresponding hypotheses, the following plan of the study has been followed.

The present study is descriptive in nature and aims at examining the effect of job satisfaction and work motivation on organizational commitment of secondary school teachers working in different types of schools. Consequently, organizational commitment has been taken as the dependent variable while the job satisfaction, work motivation, types of school, gender and teaching experience have been taken as the independent variables. Hence, the effect of the independent variables i.e. job satisfaction, work motivation, types of school, gender and teaching experience on the dependent variable i.e. organizational commitment taken in the present study was explored and inferences have been drawn.
3.1 DESIGN OF THE STUDY

In the present study, descriptive survey method was used. The study was carried out in three phases which have been discussed below:

I. **Main Effects Phase:** In this phase the main effects of type of schools, job satisfaction, gender, work motivation and teaching experience on organizational commitment were studied separately. In this study the independent variables (job satisfaction, work motivation, type of schools, gender and teaching experience) were varied at two levels as shown below:

II. **Double Interaction Phase:** In this phase, an attempt was made to find out the interaction effect of type of schools and job satisfaction; job satisfaction and gender; type of schools and gender; job satisfaction and teaching experience; type of schools and teaching experience; type of schools and work motivation; work motivation and gender; work motivation and teaching experience on the organizational commitment of
secondary school teachers. The subjects were given different designations and groups were formed to find out the interaction effects which are shown below as:

- **Interaction Effect of Type of Schools and Job Satisfaction on Organizational Commitment**
  
  $A_1B_1$: Govt School Teachers + High Job Satisfaction  
  $A_2B_1$: Private School Teachers + High Job Satisfaction  
  $A_1B_2$: Govt School Teachers + Low Job Satisfaction  
  $A_2B_2$: Private School Teachers + Low Job Satisfaction  

- **Interaction Effect of Job Satisfaction and Gender on Organizational Commitment**
  
  $B_1C_1$: High Job Satisfaction + Male Teachers  
  $B_2C_1$: Low Job Satisfaction + Male Teachers  
  $B_1C_2$: High Job Satisfaction + Female Teachers  
  $B_2C_2$: Low Job Satisfaction + Female Teachers  

- **Interaction Effect of Type of Schools and Gender on Organizational Commitment**
  
  $A_1C_1$: Govt School Teachers + Male Teachers  
  $A_2C_1$: Private School Teachers + Male Teachers  
  $A_1C_2$: Govt School Teachers + Female Teachers  
  $A_2C_2$: Private School Teachers + Female Teachers  

- **Interaction Effect of Type of Schools and Work Motivation on Organizational Commitment**
  
  $A_1E_1$: Govt School Teachers + High Work Motivation  
  $A_2E_1$: Private School Teachers + High Work Motivation  
  $A_1E_2$: Govt School Teachers + Low Work Motivation  
  $A_2E_2$: Private School Teachers + Low Work Motivation  

- **Interaction Effect of Work Motivation and Gender on Organizational Commitment**
  
  $E_1C_1$: High Work Motivation + Male Teachers  
  $E_2C_1$: Low Work Motivation + Male Teachers
E₁C₂: High Work Motivation + Female Teachers
E₂C₂: Low Work Motivation + Female Teachers

- **Interaction Effect of Job Satisfaction and Teaching Experience on Organizational Commitment**

B₁D₁: High Job Satisfaction + More Experienced Teachers
B₂D₁: Low Job Satisfaction + More Experienced Teachers
B₁D₂: High Job Satisfaction + Less Experienced Teachers
B₂D₂: Low Job Satisfaction + Less Experienced Teachers

- **Interaction Effect of Type of Schools and Teaching Experience on Organizational Commitment**

A₁D₁: Govt School Teachers + More Experienced Teachers
A₂D₁: Private School Teachers + More Experienced Teachers
A₁D₂: Govt School Teachers + Less Experienced Teachers
A₂D₂: Private School Teachers + Less Experienced Teachers

- **Interaction Effect of Work Motivation and Teaching Experience on Organizational Commitment**

E₁D₁: High Work Motivation + More Experienced Teachers
E₂D₁: Low Work Motivation + More Experienced Teachers
E₁D₂: High Work Motivation + Less Experienced Teachers
E₂D₂: Low Work Motivation + Less Experienced Teachers

**III. Triple Interaction Phase:** A combined interaction effect of all the independent variables i.e. type of schools, job satisfaction and gender; type of schools, work motivation and gender; type of schools, job satisfaction and teaching experience; type of schools, work motivation and teaching experience on organizational commitment of teachers was explored separately. The subjects were given different designations and groups were formed to find out the interaction effects which are also being represented diagrammatically in the Figures 3.1.1, 3.1.2, 3.1.3 and 3.1.4 respectively.
• Interaction Effect of Type of Schools, Job Satisfaction and Gender on Organizational Commitment

A₁B₁C₁: Govt School Teachers + High Job Satisfaction + Male Teachers
A₂B₂C₂: Private School Teachers + Low Job Satisfaction + Female Teachers
A₁B₁C₂: Govt School Teachers + High Job Satisfaction + Female Teachers
A₂B₂C₁: Private School Teachers + Low Job Satisfaction + Male Teachers
A₁B₂C₁: Govt School Teachers + Low Job Satisfaction + Male Teachers
A₂B₁C₂: Private School Teachers + High Job Satisfaction + Female Teachers
A₂B₁C₁: Private School Teachers + High Job Satisfaction + Male Teachers

Fig. 3.1.1: Distribution of cells for Analysis of Interaction Effect of Type of Schools, Job Satisfaction and Gender on Organizational Commitment of Teachers

• Interaction Effect of Type of Schools, Work Motivation and Gender on Organizational Commitment

A₁E₁C₁: Govt School Teachers + High Work Motivation + Male Teachers
A₂E₂C₂: Private School Teachers + Low Work Motivation + Female Teachers
A₁E₁C₂: Govt School Teachers + High Work Motivation + Female Teachers
A₂E₂C₁: Private School Teachers + Low Work Motivation + Male Teachers
A₁E₂C₁: Govt School Teachers + Low Work Motivation + Male Teachers
A₂E₁C₁: Private School Teachers + High Work Motivation + Male Teachers
A₁E₂C₂: Govt School Teachers + Low Work Motivation + Female Teachers
A₂E₁C₂: Private School Teachers + High Work Motivation + Female Teachers

Fig. 3.1.2: Distribution of cells for Analysis of Interaction Effect of Type of Schools, Work Motivation and Gender on Organizational Commitment of Teachers

- Interaction Effect of Type of Schools, Job Satisfaction and Teaching Experience on Organizational Commitment

A₁B₁D₁: Govt School Teachers + High Job Satisfaction + More Experienced Teachers
A₂B₂D₂: Private School Teachers + Low Job Satisfaction + Less Experienced Teachers
A₁B₁D₂: Govt School Teachers + High Job Satisfaction + Less Experienced Teachers
A₂B₂D₁: Private School Teachers + Low Job Satisfaction + More Experienced Teachers
A₁B₂D₁: Govt School Teachers + Low Job Satisfaction + More Experienced Teachers
A₂B₁D₁: Private School Teachers + High Job Satisfaction + More Experienced Teachers
A₁B₂D₂: Govt School Teachers + Low Job Satisfaction + Less Experienced Teachers
A₂B₁D₂: Private School Teachers + High Job Satisfaction + Less Experienced Teachers
Fig. 3.1.3: Distribution of cells for Analysis of Interaction Effect of Type of Schools, Job Satisfaction and Teaching Experience on Organizational Commitment of Teachers

- **Interaction Effect of Type of Schools, Work Motivation and Teaching Experience on Organizational Commitment**

  A₁E₁D₁: Govt School Teachers + High Work Motivation + More Experienced Teachers
  A₂E₂D₂: Private School Teachers + Low Work Motivation + Less Experienced Teachers
  A₁E₁D₂: Govt School Teachers + High Work Motivation + Less Experienced Teachers
  A₂E₂D₁: Private School Teachers + Low Work Motivation + More Experienced Teachers
  A₁E₂D₁: Govt School Teachers + Low Work Motivation + More Experienced Teachers
  A₂E₁D₁: Private School Teachers + High Work Motivation + More Experienced Teachers
  A₁E₂D₂: Govt School Teachers + Low Work Motivation + Less Experienced Teachers
  A₂E₁D₂: Private School Teachers + High Work Motivation + Less Experienced Teachers
3.2 POPULATION

A population is any group of individuals that have one or more characteristics in common that are of the interest to the investigator. It may be all the individuals of a particular type or a restricted part of that group (Best, 1977). The teachers working in government and private secondary schools affiliated to Haryana Board of Secondary Education (HBSE) constituted the target population for the present study.

3.3 SAMPLE

Measuring the entire population is impracticable though not entirely impossible. Therefore, a sample from the concerned population may be drawn for the purpose of data collection. In the present study, multi-stage stratified random sampling technique was used to select the sample of 600 secondary school teachers working in government and private schools affiliated to Haryana Board of School Education (HBSE). The state Haryana has four divisions namely Ambala, Gurgaon, Hisar and Rohtak. Out of these four divisions, Rohtak division was chosen randomly by using lottery method. At the
second stage, all the six districts of Rohtak division were written on the separate chits and three districts Rohtak, Jhajjar and Sonepat were randomly picked. From each of these districts, the list of schools prepared by the Directorate of Education was procured. Thereafter, sixty schools were selected randomly as each school was having 10-12 secondary teachers. In this way, 600 secondary school teachers constituted the final sample for the present study.

These were further stratified on the basis of job satisfaction, work motivation, gender and teaching experience. The teachers who scored above 154 scores on the job satisfaction scale were categorised as teachers with high level of job satisfaction and those who obtained below 148 scores were treated as the teachers with low level of job satisfaction. Similarly, the teachers who obtained above 200 scores were taken as the teachers with high level of work motivation and those who obtained below 199 scores were considered as the teachers with low level of work motivation. On the basis of teaching experience, the teachers having more than five years of experience were considered as more experienced teachers and those having less than five years of teaching experience were considered as less experienced ones. In this manner, the final sample of 480 teachers as per the requirement of the 2×2×2 cells (60 in each cell) of the paradigm was chosen, breakup details of which have been given in the Table - 3.3.1. A layout of the sample selected for the present study has also been illustrated in the Fig. 3.3.1.

<table>
<thead>
<tr>
<th>Group</th>
<th>High Job Satisfaction (120)</th>
<th>Low Job Satisfaction (120)</th>
<th>High Work Motivation (120)</th>
<th>Low Work Motivation (120)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Govt School Teachers (240)</td>
<td>Male (60)</td>
<td>Female (60)</td>
<td>Male (60)</td>
<td>Female (60)</td>
</tr>
<tr>
<td></td>
<td>Less Experienced (60)</td>
<td>More Experienced (60)</td>
<td>Less Experienced (60)</td>
<td>More Experienced (60)</td>
</tr>
<tr>
<td>Private School</td>
<td>Male (60)</td>
<td>Female (60)</td>
<td>Male (60)</td>
<td>Female (60)</td>
</tr>
</tbody>
</table>
Fig. 3.3.1: Layout of Sample Selected for the Study

3.4 TOOLS USED

1. Personal Data Sheet prepared by the investigator herself to collect the information about the teachers.
2. Organizational Commitment Scale by Hyde and Roy (2006) to assess the Organizational Commitment of teachers.
3. Job Satisfaction Scale by Dixit (1993) to measure the Job Satisfaction of teachers.

3.4.1 Personal Data Sheet
Personal Data Sheet developed by the investigator was used for getting personal information from the teachers with respect to their gender, type of school, teaching experience etc. A copy of Personal Data Sheet is given at Appendix-A.

3.4.2 Organizational Commitment Scale (OCS)

It is a Likert type five-point scale developed by Hyde and Roy (2006) to assess the organizational commitment of teachers. The test constituted 30 items which have been framed in both the languages (English and Hindi). (A copy of Organizational Commitment Scale has been given at Appendix-B).

Reliability

The reliability of the scale was determined by calculating reliability coefficient on a sample of 100 subjects. The split-half reliability coefficient was found to be 0.89.

Validity

Besides face validity, as all items were related to the variable under focus, the scale has high content validity. In order to find out the validity from the coefficient of reliability, the reliability index was calculated, which indicated high validity on account of being 0.94.

Factors of Organizational Commitment

The organizational commitment has been divided into eight factors in the Organizational Commitment Scale used by the researcher. The different factors have been illustrated in the Table-3.4.1 as below:

Table - 3.4.1
Distribution of Items in the Final Form of Organizational Commitment Scale

<table>
<thead>
<tr>
<th>Factors</th>
<th>Item No.(S)</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Work Environment</td>
<td>21,22,30,13,11,16,17,29,19,14,5</td>
<td>11</td>
</tr>
<tr>
<td>(B) Affection towards organisation</td>
<td>20,18,15,8,27,4,12,24,26</td>
<td>9</td>
</tr>
<tr>
<td>(C) Contentment</td>
<td>2,6,9,10</td>
<td>4</td>
</tr>
<tr>
<td>(D) Goal fulfilment</td>
<td>23,28</td>
<td>2</td>
</tr>
<tr>
<td>(E) Positive Thinking</td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>(F) Career Goal</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>(G)</td>
<td>Empathy</td>
<td>7</td>
</tr>
<tr>
<td>-----</td>
<td>---------</td>
<td>---</td>
</tr>
<tr>
<td>(H)</td>
<td>Empowerment</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>30</td>
</tr>
</tbody>
</table>

**Administration**

It is a self-administrating scale and does not require high technical knowledge. It can be applied to groups of any reasonable size and is easy to understand and implement. It may also be used individually. The instructions printed on the response sheet are sufficient to take care of the questions that are asked. No time limit should be given for completing the scale. However, most of the respondents should complete it in about 10 minutes. There are no right and wrong answers to the statements. The scale is meant to know the individual differs in terms of organizational commitment and is not meant to rank them as good or bad. The responses should be kept confidential. It should be duly emphasized that all statements have to be responded to and no should be left unanswered. It is not desirable to tell the subjects, the exact purpose for which the scale is being used.

**Scoring**

Scoring can be done manually, hence no scoring key is provided. Each item or statement should be scored 5 for Strongly Agree (SA), 4 for Agree (A), 3 for Neutral (N), 2 for Disagree (D) and 1 for Strongly Disagree (SD).

**3.4.3 Job Satisfaction Scale (JSS)**

It is a Likert type five-point scale prepared by Dixit (1993) to measure satisfaction with different aspects of job (Appendix - C). As the scale was to be used for the teachers of both English and Hindi medium institutions, items were framed in both the languages. The items on which 80% agreement was found were included in the scale. For the construction of Hindi version back transition method was adopted. The scale consists of 52 items which are framed in both the languages (English & Hindi).

**Reliability**

Reliability of the scale was determined by split-half method. The test was first divided into two equivalent halves and the correlation was calculated for these half
tests. From the reliability of the half test, the self correlation of the whole test was calculated by using Spearman Brown Prophecy Formula. The test-retest method also showed high reliability which is given in the following tables:

**Table - 3.4.2**
Reliability of the Job Satisfaction Scale by Split Half Method

<table>
<thead>
<tr>
<th>Version of the form</th>
<th>N</th>
<th>R</th>
<th>Index of Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Version</td>
<td>100</td>
<td>.85</td>
<td>.92</td>
</tr>
<tr>
<td>Hindi Version</td>
<td>100</td>
<td>.87</td>
<td>.93</td>
</tr>
</tbody>
</table>

**Table - 3.4.3**
Reliability of Job Satisfaction Scale by Test-Retest Method

<table>
<thead>
<tr>
<th>Version of the form</th>
<th>N</th>
<th>R</th>
<th>Index of Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Version</td>
<td>100</td>
<td>.75</td>
<td>.86</td>
</tr>
<tr>
<td>Hindi Version</td>
<td>100</td>
<td>.76</td>
<td>.87</td>
</tr>
</tbody>
</table>

**Validity**

The item validity (discrimination value) was found out by item test correlation method using Pearson’s r taking 25% highest scores and 25% lowest scores and finally calculating’ value for the items of Hindi and English version separately. The items which were insignificant had to be dropped in the final form. Initially there were 58 items of which 6 items had to be deleted as they were not found to be discriminatory in the item analysis. The distribution of items in the final form has been shown below in Table-3.4.4.

**Administration of the test**

It is a self-administered scale and can be used for groups of any reasonable size. It may also be used individually. The instructions given are printed on the scale form. No time limit should be given for this questionnaire. However usual time limit for most of the groups to finish it would be one hour. Before administering the questionnaire, it is advisable to emphasize orally that replies should be checked as quickly as possible and frankness and sincere cooperation is required. The group should be assured that
their answers would be kept in strict confidence. It should be emphasized that each and every item should be answered and that there is no right and wrong answer. So, the group should give frank opinion.

Table - 3.4.4
Distribution of items in the Final Form of Job Satisfaction Scale

<table>
<thead>
<tr>
<th>Job Factors</th>
<th>Item No.(S)</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Intrinsic Aspect of the Job</td>
<td>1,11,25,30,35,46 and 52</td>
<td>7</td>
</tr>
<tr>
<td>(B) Salary, promotional avenues and service conditions</td>
<td>3,12,19,20,31,34,45,50</td>
<td>8</td>
</tr>
<tr>
<td>(C) Physical facilities</td>
<td>2,10,24,29,36,43,48,49,51</td>
<td>9</td>
</tr>
<tr>
<td>(D) Institutional Plans and Policies</td>
<td>4,13,26,38,40,47</td>
<td>6</td>
</tr>
<tr>
<td>(E) Satisfaction with authorities</td>
<td>5,14,21,27,32,41</td>
<td>6</td>
</tr>
<tr>
<td>(F) Satisfaction with social status and family welfare</td>
<td>8,9,17,18,23</td>
<td>5</td>
</tr>
<tr>
<td>(G) Rapport with students</td>
<td>7,15,22,28,33,39</td>
<td>6</td>
</tr>
<tr>
<td>(H) Relationship with Co-workers</td>
<td>6,16,37,42,44</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>52</strong></td>
</tr>
</tbody>
</table>

Scoring

Scoring is done on a five-point scale from one to five (1 to 5). For the response of ‘strongly agree’ scoring is 5 and for ‘disagree’ it is 2, for ‘undecided’ 3 marks are allotted and for ‘agree’ scoring is 4 and for ‘strongly disagree’ it is 1. The subjects having scores above 154 should be considered to possess high level of job satisfaction and those obtaining the scores below 148 should be referred to as having low level of job satisfaction.

3.4.4 Employees Motivation Schedule (EMS)

It is a four-point scale developed by Srivastava (1988) to assess the work motivation of teachers. The test constitutes 70 items relating to needs being manifested in work which are framed in both the languages (Hindi and English). (A copy of Employees Motivation Schedule has been given at Appendix-D). The present
motivation schedule purports to assess the magnitude (level) of work motivation generated by the following needs of the employees:

### Table - 3.4.5
**Different Type of Needs and their Characteristics**

<table>
<thead>
<tr>
<th>S. No</th>
<th>Type of Need</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Need for personal growth</td>
<td>Improvement of self and of competence, learning new things.</td>
</tr>
<tr>
<td>2.</td>
<td>Need for achievement</td>
<td>High production; goal achievement, competition</td>
</tr>
<tr>
<td>3.</td>
<td>Need for self control</td>
<td>Alert; sincere to job responsibilities, attainment of goal dead line</td>
</tr>
<tr>
<td>4.</td>
<td>Need for monetary gains</td>
<td>Immediate monetary gains or rewards, increments in salary or wages</td>
</tr>
<tr>
<td>5.</td>
<td>Need for non-financial gains</td>
<td>Status, recognition, appreciation, prospects</td>
</tr>
<tr>
<td>6.</td>
<td>Need for social affiliation</td>
<td>Participation, co-operation in group activities</td>
</tr>
<tr>
<td>7.</td>
<td>Need for autonomy and self-actualization</td>
<td>Self-appraisal or to recognize one’s weak and strong points, independence and privacy</td>
</tr>
</tbody>
</table>

### Reliability

The following table records the reliability coefficients of the seven sub-scales of the Schedule:

### Table - 3.4.6
**Split-half and Retest Reliability coefficients of the Seven Sub-Scales of Employees Motivation Schedule**

<table>
<thead>
<tr>
<th>Sub-scales</th>
<th>Serial No. of the items</th>
<th>Split-half (N=200)</th>
<th>Retest (N=95)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-scale 1</td>
<td>1 - 10</td>
<td>.82</td>
<td>.86</td>
</tr>
<tr>
<td>Sub-scale 2</td>
<td>11 - 20</td>
<td>.79</td>
<td>.84</td>
</tr>
<tr>
<td>Sub-scale 3</td>
<td>21 - 30</td>
<td>.74</td>
<td>.84</td>
</tr>
<tr>
<td>Sub-scale 4</td>
<td>31 - 40</td>
<td>.77</td>
<td>.81</td>
</tr>
<tr>
<td>Sub-scale 5</td>
<td>41 - 50</td>
<td>.81</td>
<td>.83</td>
</tr>
<tr>
<td>Sub-scale 6</td>
<td>51 - 60</td>
<td>.79</td>
<td>.84</td>
</tr>
<tr>
<td>Sub-scale 7</td>
<td>61 - 70</td>
<td>.72</td>
<td>.79</td>
</tr>
</tbody>
</table>
Validity

In the process of validation of the scale, the homogeneity of the items constituting the seven sub-scales was ascertained. For the purpose bi-serial correlation between the score on each items and the score on the sub-scale, of which the items was part, was computed. The responses on the items selected to be included in various scales were found to be considerably consistent with the responses on the corresponding sub-scales as a whole.

The validity of the scale was further ascertained by correlating the scores on the Employees Motivation Schedule with the scores on the measures of job involvement and role stress. The following table provides the obtained results:

<table>
<thead>
<tr>
<th>Work Motivation</th>
<th>Job involvement (N=100)</th>
<th>Role Stress (N=200)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Growth</td>
<td>.78</td>
<td>-.65</td>
</tr>
<tr>
<td>Achievement</td>
<td>.73</td>
<td>-.57</td>
</tr>
<tr>
<td>Self-Control</td>
<td>.65</td>
<td>-.50</td>
</tr>
<tr>
<td>Monetary gains</td>
<td>.55</td>
<td>-.32</td>
</tr>
<tr>
<td>Non-financial gains</td>
<td>.53</td>
<td>-.31</td>
</tr>
<tr>
<td>Social Affiliation</td>
<td>.67</td>
<td>-.39</td>
</tr>
<tr>
<td>Self-actualization</td>
<td>.53</td>
<td>-.38</td>
</tr>
<tr>
<td>The Whole Scale</td>
<td>.83</td>
<td>-.51</td>
</tr>
</tbody>
</table>

Administration of the test

The Employee Motivation Schedule is applicable to a wide range of individuals operating in the context of various production and non-production organizations. It is based on the assumption that individuals operating in context of industries and other
employments are motivated by a number of needs, individually or in different combinations. It can be administered on an individual as well as a group basis. Persons taking the scale should be told to indicate their feelings about each item rather than attempting to discern a ‘correct’ answer. Administrators should emphasize that the individual should read and respond to each item solely on the basis of how the item applies to his or her own feelings about the world of work. The total administration time for the scale should be about 25 minutes including time for collection and contribution of booklets and time for completion of biographical data on the answer sheet.

**Scoring**

Scoring can be done manually. Each item should be scored 4 for always, 3 for mostly, 2 for seldom and 1 for never. The individuals with very high scores i.e. above 200 should be considered to have a very high level of work motivation and those with low scores i.e. below 199 indicate low level of work motivation.

### 3.5 PROCEDURE FOR DATA COLLECTION

Data collection is essentially an important part of the research process so that the inferences, hypotheses or generalizations tentatively held may be identified as valid, verified as correct or rejected as untenable. Collection of factual information of data requires adoption of a systematic procedure, because as per Whitney (1964) “Data are the things we think with. They are the raw material of reflection until by comparison, combination and evaluation they are stepped up to higher levels of generalization, where again they serve as basic material for further and higher thinking”. It also requires collection of relevant data which is adequate in quality and quantity and as reliable and valid as possible.

In the beginning, all the 600 secondary school teachers working in government and private schools, selected for the present study were asked to fill the columns of the personal data sheet prepared by the investigator. After establishing rapport with the teachers, Organizational Commitment Scale (OCS) was administered on the subjects. The respondents were asked to answer 30 items by marking a tick (√) in any of the four cells corresponding to each sentence within 10 minutes. They were further told that scale was meant to know the individual differences in terms of organizational commitment and not to rank them as good or bad. The responses would be kept
confidential. It was also duly emphasized that all statements were to be responded to and none be left unanswered.

Secondly, Job Satisfaction Scale (JSS) which is a Likert type five-point scale was given to the same subjects. The group was assured that their answers would be kept in strict confidence. The scale comprised of 50 items which were followed by five response categories i.e. strongly agree, agree, neutral, disagree and strongly disagree. It was emphasized that each and every item had to be answered and that there was no right and wrong answer. So, the group should give their frank opinion. Though there was no time limit for the test but the respondents were instructed to complete the test within an hour.

After the above two tests, the third one Employee Motivation Schedule (EMS) was administered on the same teachers. There were 70 items in the test which were to be responded on a four point scale i.e. always/mostly/seldom/never by the subjects. They were asked to read each item carefully and to put a tick mark (√) in the cell provided on the right side of the statements for answering the given items. The respondents were asked to complete the test within 25 minutes, the prescribed time limit for the test. The investigator assured the subjects that their answers and scores would be treated with strict confidence.

While administering all tests, the time limit was strictly followed as per the instructions given by the authors. The investigator gave her sincere attention via supervision for the time while administering the tests. After the administration of tools, the next step was scoring the answer sheets. Scoring of the answer sheets was done strictly according to the instructions given in the concerned manual.

### 3.6 STATISTICAL TECHNIQUES USED

Statistical techniques are employed on the raw scores to make it meaningful and to test the significance of the scores. Without use of statistical techniques raw scores do not have their own meaning and relevance. In order to study the nature of the data, descriptive statistics i.e. mean and standard deviation’s were calculated with the help of MS Excel. The mean scores of organizational commitment with respect to type of
schools, job satisfaction, work motivation, gender and teaching experience were also presented pictorially in the form of bar diagrams and line graphs.

The Three-Way Analysis of Variance (ANOVA) with 2×2×2 Factorial Design was computed manually to study the main effects and interaction effects of the variables i.e. type of schools, job satisfaction, work motivation, gender and teaching experience on organizational commitment supplemented by ‘t’ test wherever F-value was found to be significant. The Hartley’s Test of Homogeneity of Variance was also used to test the assumption of homogeneity of variance before applying Three-Way ANOVA. The ANOVA used was Balanced ANOVA as Three-Way ANOVA tests are typically applied to a set of data in which sample sizes are kept equal for each treatment combination. On the basis of these tools, procedures and statistical techniques employed, the analysis of data, interpretation and discussion of results have been presented in the forthcoming chapter.