

### **3.0. Introduction**

The methodology of research forms the pillar of research. It guides the investigator how to conduct research for a specific problem applying a specific procedure of research. It explains the procedure of selecting sampling, tools and techniques, data collection and data analysis in depth. The following methodology of research helped the researcher to carry out the research effectively. It clarified the design and procedure for the present study of teacher evaluation system systematically.

### **3.1. Research Design of the Study**

The researcher adopted descriptive survey method for the present study. It aims to accurately describe the research problem. As Best & Kahan (2009) cited for descriptive survey “it involves a clearly defined problem and definite objectives. It requires expert and imaginative planning, careful analysis and interpretation of the data gathered and logical and skilful reporting of the findings.” The collected data for descriptive studies served the purpose of analysing the frequencies and identifying pattern in the survey response. The details of methodology are presented below.

### **3.2. Population of the Study**

All the teachers, principals of jilla panchayat schools, ashram shalas, private schools Jawahar Navodaya Vidyalaya (JNV), Eklavya Model Residential schools (EMRS), all Cluster Resource Coordinators (CRC Coordinator) and Block Resource Persons (BRP) of Gujarat state constituted the population of the present study.

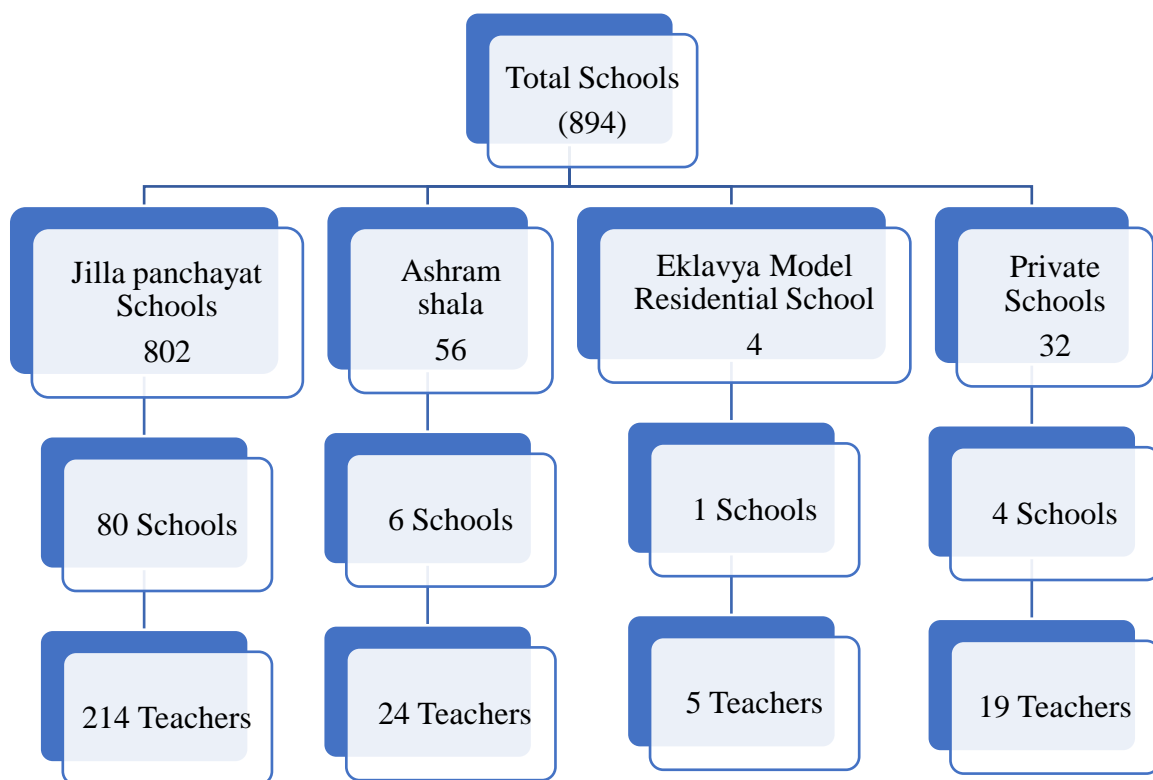
### **3.3. Sample of the Study**

There were 802 government elementary schools managed by Jilla Panchayat Shikshan Samiti, 56 Ashram shalas, 32 Private schools, 4 Eklavya Model Residential schools 1 JNV and 65 CRC coordinators and 35 Block Resource Person (BRP) in Tapi District of Gujarat in the year 2018-19.

The sample of the study was selected applying stratified random sampling technique. 10% schools of government elementary schools managed by Jilla Panchayat Shikshan Samiti, Ashram shalas, Private schools. Eklavya Model Residential schools from the target

population were selected. So, 80 government elementary schools managed by Jilla Panchayat Shikshan Samiti, 6 Ashram shalas, 4 Private schools, 1 Eklavy Model residential schools 1 JNV were selected. From these selected schools, a maximum of 5 teachers from each school of different management types were selected and all teachers were selected if schools had less than 5 teachers. 80 principals of Jilla panchayat schools, 6 principals of ashram shalas, 4 principals of private schools and 1 principal of Jawahar Navodaya Vidyalaya (JNV) and 1 principal of Eklavya Model Residential Schools (EMRS) constituted the final sample of the study. So, the sample included 214 teachers of Jilla panchayat schools, 24 teachers of ashram shalas, 19 teachers of private schools and 5 teachers of JNV and 5 teachers of EMRS for the present study. All 30 CRC coordinators were selected automatically on the basis of the selected sample of schools such as principal and teachers which fell under their cluster. If there were vacant posts of CRC Coordinators, in charge CRC Coordinators were selected. 4 Block Resource Persons (BRP) constituted the sample of the study.

**Figure 3.1: Teacher's (Sample) Selection for the Study**



### **3.4. Description of Tools**

As per the requirement of the objectives of the study, the data for the present practices of teacher evaluation related to the needs and objectives of teacher evaluation, procedure of teacher evaluation, problems and suggestions for the improvement of teacher evaluation system were needed for the study. The aim of the study was also to understand the perceptions of the school functionaries towards teacher evaluation system. The way teachers and principals perceived the present system was an important data in order to understand their perceptions towards the system. So, in order to achieve the objectives of the study, the researcher developed the following tools and collected the data with their help.

- I. Questionnaire:** To achieve objective no. one, three and four of the study the researcher developed questionnaires for teachers, principals, CRC Coordinators and Block Resource Persons (BRP)
- II. Perception Scale:** To achieve objective no. two, the researcher developed perception scales for teachers and principals.

#### **3.4.1. Questionnaires for Teachers, Principals, CRC. Coordinators and Block Resource Persons (BRP)**

Based on the objectives of the study, the various tools of data collection were administered. The questionnaires for teachers, principals and CRC coordinators and BRPs were constructed separately. The aim of questionnaire for teachers was to get data in order to understand the evaluation practices going on in their institutions, whereas the aim of questionnaire for principals was to collect the data regarding the practices of evaluation by the principals as a superior and other evaluation practices as seen by them. The CRC Coordinator and BRP were the participants for whom a common questionnaire was constructed. The objective of preparing a tool for CRC and BRP was to understand how effectively the resource persons of SSA were doing formative evaluation and to understand the procedure of evaluation accordingly.

##### **3.4.1.1. Questionnaire for Teachers**

- 4.** The Questionnaire for teachers were constructed to collect data from the teachers about different practices in terms of self-evaluation, peer evaluation, evaluation by superior, student evaluation and classroom observation in the different management types of schools. The questionnaire for teachers was constructed considering different

management types of schools. So, there were two questionnaires for the teachers. One common for the teachers of Jilla panchayat schools, ashram shala and EMRS where as other one was for private school and JNV teachers. The Questionnaire for the teachers of Jilla panchayat schools, ashram shala and EMRS comprised of all the common dimensions along with some special program such as Gunotsav and evaluation by SSA staff which did not exist in the private schools. However, the questionnaire for private schools and JNV also comprised of common dimension and a general practice of teacher evaluation including self-evaluation, peer evaluation, student evaluation of teachers, inspection which were expected in these schools. In this regard the questionnaire for teachers for the study of teacher evaluation included many common dimensions related to teacher evaluation such as need and objectives of teacher evaluation, various programs related to teacher evaluation, criteria and standards for teacher evaluation, frequency of evaluation, time schedule, methods of evaluation, techniques, dimensions of teacher evaluation, preparation for teacher evaluation done by the teachers, feedback, follow up work, teacher evaluation note/report. It also consisted of competency of evaluator, relationship of teachers with evaluators and grade given to the teachers. Along with these dimensions, influence of various effects on teacher evaluation, innovation in teacher evaluation, advantages and problems of teacher evaluation, satisfaction expressed on teacher evaluation and valuable suggestions for the improvement of existing teacher evaluation system were a part of the questionnaire. All these dimensions were the same in the both the questionnaires. However, in the case of a special program, some questions were asked pertaining to that. In the questionnaire there were both kinds of questions – close ended and open ended. Most of the questions were close ended questions which had different options and there was one option of ‘any other’ which gave freedom to the teachers to express their views. If any practice of teacher evaluation was not in existence in a particular school, the teacher could write NA i.e. not applicable and leave it.

5. The questionnaire also translated in Gujarati language for Gujarat medium teachers to overcome the barrier of language and could describe the different practices running in the schools.

#### **5.4.1.1.Questionnaire for Principals**

The Questionnaire for principals was constructed focusing majorly on evaluation by superiors and getting data of other evaluation practices too. The questionnaire for principals was constructed including different dimensions regarding need and objectives of teacher evaluation system, various programs related to the teacher evaluation criteria, teacher evaluation format, the different methods and techniques followed for teacher evaluation, frequency of evaluation, plan or schedule and dimensions of teacher evaluation. The questionnaire also comprised of dimensions including preparation, cooperation of teachers, feedback, grade, incentives to teachers, note/report of teacher evaluation and review of teacher evaluation report. Besides these, administrative power, training, problems and rationale for decision making, difficulties and problem, satisfaction expressed on teacher evaluation and suggestions for improvement of existing teacher evaluation system were a part of the questionnaire. Besides these, general observation related to other evaluation practice was one of the important dimensions.

In the questionnaire there were both kinds of questions – close ended and open ended. Most of the questions were close- ended questions which had different options and there was one option of ‘any other’ which gave freedom to the principals to express their views. If any practice of teacher evaluation was not in existence in a particular school, the principals could write N/A i.e. not applicable and leave it.

The questionnaire was also translated into Gujarati language for Gujarat medium principals to overcome the barrier of language and could examine different practices running in the schools. The questionnaire was similar as per their programs for all the types of schools.

#### **5.4.1.2.Questionnaire for CRC Coordinator and Block Resource Person:**

The questionnaire for CRC Coordinator and BRP was constructed to collect the data regarding evaluation by resource persons (superior). There were 31 items in the questionnaire for Cluster Resource Centre Coordinator (CRC Coordinator) and Block Resource Person (BRP).

The different dimensions included in the questionnaire for CRC Coordinator and BRP were the need and objectives of teacher evaluation, criteria of teacher evaluation, school selection, process of teacher evaluation, frequency and time allotted for evaluation. Besides these dimensions, evaluating techniques, format for teacher evaluation, plan and schedule of evaluation, dimensions of teacher evaluation, cooperation of teachers, feedback, and

note/report of teacher evaluation also form an important part of the questionnaire. Not only these, but also experience sharing meetings, rationale for decisions, satisfaction of evaluator with the present system and the suggestions for improving the present practice of teacher evaluation were an essential part of the questionnaire.

In the questionnaire there were both kinds of questions – close ended and open ended. Most of the questions were close ended questions which had different options and there was one option of ‘any other’ which gave freedom to the CRC Coordinator and BRP to express their views. If any practice of teacher evaluation was not in existence in a particular school, the CRC Coordinator and BRP could write N/A i.e., not applicable and leave it. The Questionnaire was also translated into Gujarati language for CRC Coordinator and BRP to overcome the barrier of language and could examine different practices running in the schools.

#### **5.4.2. Perception Scales:**

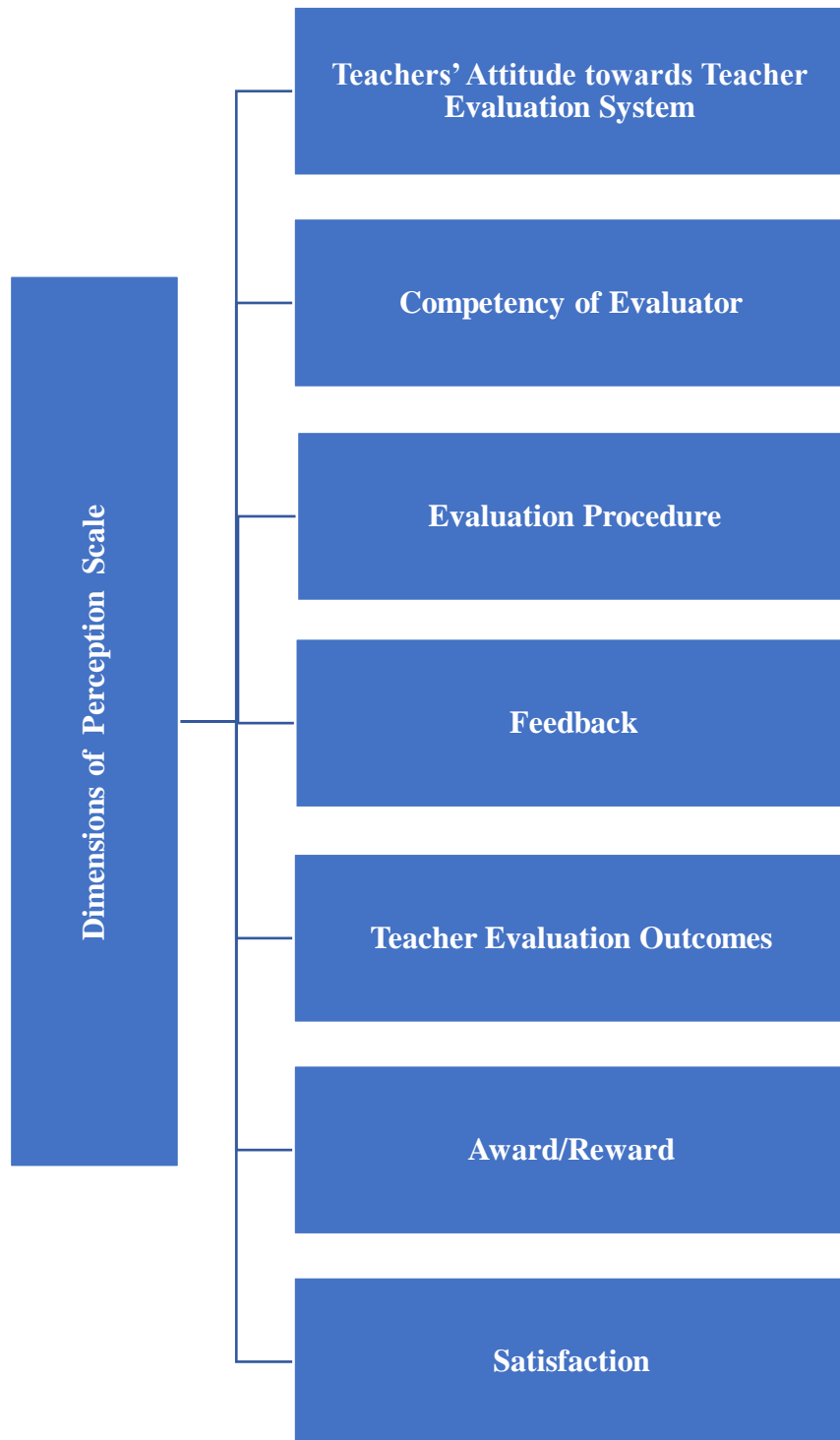
Based on the objective of the study, two different Perception scales were developed to study the perceptions of school functionaries. The 5 points Likert type scale was developed. The aim of preparing a perception scale for teachers was to study how the teachers of schools falling under different management types perceived the teacher evaluation system. Whereas, the aim of preparing a perception scale for principals was to study how the principals under different management types of schools perceived the teacher evaluation system.

##### **5.4.2.1. Perception Scale for Teachers:**

A five-point Likert type perception scale was developed for the teachers. The aim of the perception scale was to study perception of teachers of different management types of schools such as elementary schools managed by Jilla Panchayat Samiti, ashram shalas, private schools, Jawahar Navodaya Vidyalaya (JNV), and Eklavy Model Residential schools (EMRS). The perception scale was common for all the teachers of the different types of schools. For the teachers of Gujarati medium schools, the tool was translated in Gujarati language to overcome the barrier of language.

The perception scale for teachers comprised of 23 items. It included dimensions such as teachers’ attitude towards teacher evaluation system, competency of evaluator, evaluation procedure, feedback, teacher evaluation outcomes, reward/award and satisfaction.

**Figure 3.2: Dimension of Teacher Evaluation in Teacher Perception Scale**



**Table 3.1: List of Dimensions and Components with their respective item Numbers in Perception Scale for Teachers**

<b>Sr. No.</b>	<b>Item number</b>	<b>No. of items allotted</b>	<b>Dimension</b>	<b>Components</b>
<b>1</b>	1 to 5	05	Teachers' attitude towards teacher evaluation system	Positive attitude Growth, Sense of confidence Enhancement in job satisfaction
<b>2</b>	6	01	Competency of evaluator	Competency of evaluator
<b>3</b>	7 to 13	07	Evaluation procedure	Punctuality Objective evaluation Frank and objective reflection in self-evaluation Evaluation based on student performance Timely special assistance required by the teachers, Follow up, Work environment
<b>4</b>	14 to 15	02	Feedback	Effect of feedback clarity of feedback
<b>5</b>	16 to 20	05	Teacher evaluation outcomes	Motivation Effective performance, Identification of strength and weakness Opportunity for experience sharing Data of teacher performance
<b>6</b>	21 to 22	02	Award/ Reward	Appropriate grade Effect of rewarding teachers
<b>7</b>	23	01	Satisfaction	Satisfaction with present evaluation system



Thus 23 items covered 7 dimensions of perception of teachers towards teacher evaluation system. The dimension of teachers' attitude towards teacher evaluation system consisted 5 items. It comprised components such as positive attitude, growth, accountability, sense of confidence, increment in job satisfaction. The dimension related to competency of evaluators. The dimension of evaluation procedure consisted of 7 items. It included components such as punctuality, objective evaluation, reflection of frank and objective performance in self-evaluation, evaluation of teacher performance based on students' performance, timely special assistance required by the teachers, follow up work by evaluators, and work environment. The dimension of feedback comprised of 2 items. The items were on effect of feedback and clarity of feedback. The dimension of teacher evaluation outcomes comprised of 5 items. This dimension included components such as motivation, effective performance, identification of strength and weakness, opportunity for experience sharing, and data of teacher performance. The dimension of award /reward included appropriate grade on performance and effect of rewarding teachers whereas, the dimension of satisfaction included satisfaction of teacher's with the present evaluation system.

### **Marking Scheme**

The 5point Likert type perception scale consisted of 23 statements. Every statement had 5 alternatives stated in the scale. It ranged from strongly agree to strongly disagree. The five alternatives included strongly agree, agree, undecided, disagree, strongly disagree. The scores were assigned as follows, strongly agree (5), agree (4), undecided (3), disagree (2) strongly disagree (1). For each statement teachers were required to tick ( ) on one alternative only.

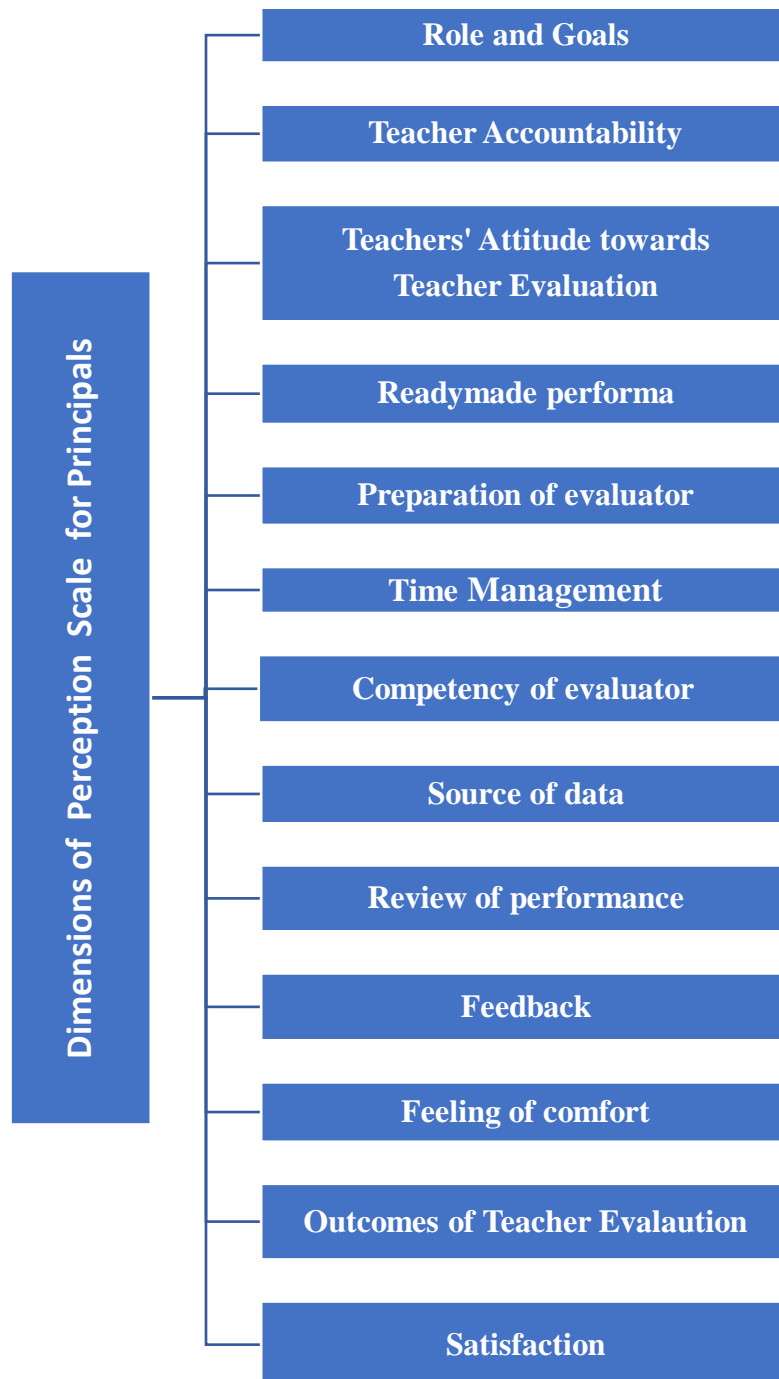
#### **5.4.2.2.Perception Scale for Principals:**

**A five-point Likert type of** scale was developed to serve the purpose of studying perceptions of the principals regarding the teacher evaluation system. The aim of the perception scale was to study perceptions of the principals of different management types of schools. The schools included were elementary schools managed by Jilla Panchayat Samiti, ashram shalas, private schools, Jawahar Navodaya Vidyalaya (JNV), and Eklavy Model Residential schools (EMRS). The perception scale was common for all the principals of the different types of schools. For the principals of Gujarati medium schools, the tool was translated into Gujarati language.

The scale comprised of 30 items. It included various dimensions. The dimensions included role and goal of teachers, teacher accountability, Teachers' attitude towards teacher

evaluation system, teachers' perception towards readymade Performa/format, teacher evaluation methods, preparation of evaluator, time management, competency of evaluator, source of data, review of performance, feedback, feeling of comfort, follow up work, outcomes and satisfaction with the job.

**Figure 3.3: Dimensions of Teacher Evaluation in Principal Perception Scale**



**Table 3.2: List of Dimensions and their respective item Numbers in Perception Scale  
for Principals**

<b>Sr. No.</b>	<b>Item number</b>	<b>No. of items allotted</b>	<b>Dimension</b>	<b>Components</b>
<b>1</b>	1 to 2	2	Role and goals	Clarity of teacher's job Responsibility of teachers
<b>2</b>	3	1	Teacher Accountability	Teacher Accountability
<b>3</b>	4	1	Teachers' attitude towards teacher evaluation	Teachers' attitude towards teacher evaluation
<b>4</b>	5	1	Readymade Performa/Format	Comprehensiveness of readymade Performa/Format
<b>5</b>	6 to 7	2	Preparation of evaluator	Preparation for evaluation Checking lesson plan
<b>6</b>	8 to 9	2	Time management	Time management
<b>7</b>	10 to 11	2	competency of evaluator	Academic knowledge Demonstration of teaching
<b>8</b>	12 to 14	3	source of data	Classroom observation Student evaluation
<b>9</b>	15	1	Review of performance	Review of performance
<b>10</b>	16 to 18	3	feedback,	Timely feedback Acceptance of negative feedback positively Encouraging teachers
<b>11</b>	19	1	Feeling of comfort	Feeling of comfort
<b>12</b>	20	1	Follow up work	Follow up work

<b>13</b>	21 to 29	9	Outcomes of teacher evaluation	Need of improvement Quality of education Knowledge of effectiveness of performance Getting innovative ideas Helping novice teachers Learnings through teacher evaluation Development of mutual understanding Professional development plan Motivation
<b>14</b>	30	1	Satisfaction	Satisfaction with present system

The perception scale for principals had 30 items. It covered 14 various dimensions to understand perceptions of the principals. The dimension related to role and goal included items such as clarity of teacher's job and responsibility and objectives for teachers' achievement. The dimension related teachers' accountability, teachers' attitude, reviews of performance, feeling of comfort and satisfaction consisted of the same components. The dimension related to the available readymade performa/format comprised of components of comprehensiveness. The item concerning preparation made by evaluators comprised of preparation and checking of lesson plans. There was also the dimension related to time management which comprised of following the schedule and opinion on utilization of time. The competency of evaluators included components such as academic knowledge and demonstration teaching by them. The sources of data included components such as classroom observation and student evaluation. The dimension related review of performance contained the components of effective teacher evaluation. The dimension of feedback included timely feedback, acceptance of negative feedback positively and encouraging teachers for better performance by giving them positive reinforcement. The dimensions related to the outcomes of teacher evaluation included need for teacher improvement, quality of education, knowledge of effectiveness of performance, getting innovative ideas, helping novice teachers, learnings through teacher evaluation, development of mutual understanding between principals and teachers, developing professional development plan, and motivation.

## **Marking Scheme**

The five points likert type perception scale consisted of 30 statements. Every statement had five alternatives stated in the scale. It extended from strongly agree to strongly disagree. It included five alternatives as strongly agree, agree, undecided, disagree, strongly disagree. The score was assigned for strongly agree (5), agree (4), undecided (3), disagree (2) strongly disagree (1). Every statement has been provided with options against which the principals as participants needed to put a (✓) mark.

## **5.5. Validation of the Tools**

The prepared tool was given to the four subject experts in field of Education for validation of content for its relevance and appropriateness to the study and its language. The tool was reviewed and accordingly, inclusion, omission and modification of the items in the tool has been done. The list of experts who validated the tools is attached in the appendix. The validated tool is also attached in the appendix. The first draft of the tool was shown to the expert requesting for their suggestions/modification if any. The following suggestions were incorporated in the tools

- i. Initially the first draft of the questionnaire for teachers was common for all the teachers of different types of schools. Therefore, the tool was too lengthy and many questions were not applicable to all. According to the suggestions of the experts' changes were made and the common tool for collecting data from the teachers was divided into two separate tools on the basis of different management types of schools. The objective was to enable teachers to handle the tool conveniently after the omission of items not applicable to them. The researcher prepared separate tools for teachers, one for teachers of Jilla Panchayat schools, ashram shala and EMRS and the other for teachers of JNV and EMRS.
- ii. It was suggested that the different schools might have different practices for teacher evaluation. All the practices might not exist in all the schools. Therefore, one option of NA should be added in instruction in the tool. Incorporating this suggestion in the tool the researcher added NA option in the instruction of the tool

## 5.6. Data Collection Procedure

The permission for data collection was taken from the principals of different types of schools in order to collect data from them and their teachers. Apart from this, the researcher also took permission of the BRC coordinator to collect data from the CRC coordinators and Block resource persons. The data was collected by the researcher personally with the help of questionnaire and perception scale during the academic sessions of 2017-18 (in April to May) and 2018-19 from the Elementary schools of Tapi district. To ensure high response in a limited time frame, the respondents were given three to seven days' time to complete the tools. The researcher also attempted that the respondents furnish information in the tools in the presence of the researcher if possible. The researcher also gave reminder to the respondents to furnish data.

## 5.7. Data Analysis

The collected data were analysed on the basis of its nature. The data collected using questionnaires and perception scale were analysed quantitatively as well as qualitatively applying descriptive analysis techniques of frequency and percentage and intensity index. The objective wise data analysis techniques are as follow.

**Table 3.3: Objective wise Tools and Data Analysis Techniques**

Objectives	Tools	Statistical Technique Used
Objective 1	Questionnaire	Frequency, percentage, content analysis
Objective 2	Perception scale	Frequency, percentage intensity index
Objective 3	Questionnaire	Frequency and percentage content analysis
Objective 4	Questionnaire	Frequency, percentage, content analysis

### 5.7.1. Objective 1, 3 and 4 related Data Analysis

To study the teacher evaluation practices in different management types of schools, questionnaires were used to collect data. The data collected using questionnaires were analysed quantitatively as well as qualitatively. The data pertaining to close -ended questions was analysed applying descriptive statistical analysis through frequency and percentage. However, the data pertaining to open-ended questions was analysed applying content analysis method. Most of the content analysed data was quantified in terms of

frequency and percentage to know the responses of the majority. The analysed data was synthesized and presented in form of table with frequency and percentage both together for better understanding. The analysis was divided into different sections. The first section of analysis of data collected from teachers and principals and CRC coordinators through the questionnaire, highlighted evaluation by superior, the second section threw light on the Gunotsav program, the third and fourth section focused on the inspection and self-evaluation. The Sixth section was about the problem in teacher evaluation and last section on suggestion to improve the system, The data pertaining to CRC Coordinator was presented only in the section of evaluation by superior.

### 5.7.2. Objective 2 related Data Analysis

To study the perception of school functionaries towards the present system of teacher evaluation a perception scale was used for collecting the data. The data collected through the perception scale were analysed using descriptive analysis, applying frequency and percentage. Further, to know the intensity of data, intensity index was applied. with a view to measure exact intensity of participants towards the given statements from 1 to 5 on five-point likert type scale. The average intensity index was calculated in each dimension. The perception scale indicated five alternatives such as strongly agree, agree, undecided, disagree and strongly disagree. Intensity index for each statement was calculated applying following formula given below.

$$\text{Intensity Index (II)} = \frac{5 \times f_1 + 4 \times f_2 + 3 \times f_3 + 2 \times f_4 + 1 \times f_5}{n}$$

Where,

f1 = frequency of Strongly Agree

f2 = Frequency of Agree

f3 =Frequency of Undecided

f4 = Frequency of Disagree

f5 = Frequency of Strongly Disagree

n = Number of Respondents

After finding the intensity index of each statement, the average intensity index of statements was calculated dimensions wise and the overall average intensity index was calculated by the formula given below.

$$\text{Average Intensity Index (AII)} = \frac{\text{Sum of Intensity Index of all respondents}}{\text{Total No.of Statements}}$$

## **5.8. Conclusion**

Through this chapter the researcher has presented the methodology of research applied for the present study. The researcher described the plan and procedure followed for the study. It can be observed how the sample were selected and the procedure of tool construction as well as data collection. This chapter also described the procedure applied for analyzing data and is presented in detail in the next chapter.