CHAPTER – III

METHODOLOGY

3.1 Introduction

An attempt has been made in this chapter to present the methodology of the study. In fact, the level of educational achievements in a particular society can only be evaluated on the basis of the performance of teachers at both institutional as well as societal levels. There has been common consensus among the intellectuals and the policy makers that there is an urgent need to give due consideration to the issues related to teachers so as to provide quality education to children. Keeping this fact in mind, there has been series of inputs in the state. It is probably for the first time in the history that the elementary education has been given the shape of National Movement in the form of Sarva Shiksha Abhiyan (SSA). It is through this programme that the dream of qualitative comprehensive education is being realized in the state. In this regard the role of a teacher is of paramount importance.

There have been number of Teachers’ Training Programmes being organized in the state mainly through District Institute of Education & Training (DIETs) under SSA. The present study mainly emphasizes on the overall impact of in-service training programmes being organized under Sarva Shiksha Abhiyan with classroom interaction, particularly in terms of implementation of new and innovative teaching techniques at classroom level by the teachers after getting such trainings. In view of this, the present study has been tilted as “Impact of in-service teacher training programme
Under SSA in classroom interaction”. In order to assess the performance output of the teachers, the researcher adopted standardized educational methodology of eliciting the perceptions of teachers and observations from the institutions. The method followed for sampling is stratified random sampling; the researcher also covered different variables for measurement of perceptions of teachers regarding the impact of in-service training under SSA classroom interaction in Visakhapatnam district.

3.2 Significance of the study

According to the Ministry of Education (2007), one of the world’s most important issues concerning educational systems is preparing the students to get the highest possible achievement. The significance of this issue arises from the relationships between the educational system and other social, political and cultural organizations. The issues of achievements and underachievement among students have been depends on the performance of the teachers in those schools.

However, not much attention has been paid to the aspect of the productivity of teachers. Since the teacher training aspect plays an important role in influencing productivity, the present study aims at examining the impact of in-service teacher training under SSA in classroom interaction and at the same time it analyses the effect of teacher training course on the productivity skills of teachers. It has been known for more than 20 years that the effects of training on performance skills of teachers vary widely as a function of differences in teachers’ personal attributes and the contexts in which implementation occurs, this study employs the personal attribute of
self-esteem as a trainee's performance variable to the relationship with classroom interaction.

In-service teacher training is an important programme for two main reasons. Firstly, considering the vast resources which are being spent on education, and particularly training itself, it is essential to ensure that these financial resources are well utilised. Secondly, the quality and quantity of the output in the form of well-educated students with good attitudes will determine the type of leadership, management and workforce. So, since the teacher training aspect plays an important role in influencing productivity, the present study aims at examining the effect of in-service teacher training course on the productivity skills of teachers and its reflections on the classroom interaction.

3.3 Method of Study

The study aims at knowing the perceptions of the teachers on the impact of in-service teacher training under SSA and its classroom interaction. For this the investigator followed the Random Sampling Method for data collection. This method gathers data from a relatively large number of cases at a particular time. It is not concerned with characteristics of individuals. It must not be confused with the more clerical routine of gathering and tabulating figures. It involves a clearly defined problem and definite objectives. It requires expert and imaginative planning, careful analysis and interpretation of the data gathered, logical and skillful reporting of the findings. After identifying the areas for the study, the required data collected with the help of pre-designed questionnaire and other sources.
3.4 Selection of the Tools

Tool is an important instrument for any socio-demographic researches. The schedule based questionnaire is the important tool for the present investigation. Here there are four questionnaires were employed for the current study. Each one is used for different purpose which is related to the present investigation.

After collecting the necessary information about the study and supporting literature, the following tools have been applied for collecting data by random sampling method. The researcher collected the required data through two instruments i.e., interview schedules and questionnaires for survey. The questionnaires and schedules of the present investigation were adopted from the one of the famous study **NCERT-2009**. The necessary data was collected from the target groups/stakeholders i.e., teachers.

3.5 Tools of data collection

The purpose of this research is to know the opinion of the teachers on the impact of in-service teacher training under SSA classroom interaction. This type of study demands direct answer from the subjects without any ambiguity will determine the factors contributing positively or negatively for assessing the functioning and the effect of the SSA programme among rural, urban and tribal area primary and secondary schools. Hence the tool of questionnaire was selected for collecting the data.

In the present study the researcher has used both schedules and questionnaires. Each one used for a different purpose. These are 1) Schedule
is used to analyse the Trainees perception about in-service training, 2) Questionnaire use to conduct an achievement test on general subjects, 3) Questionnaire used to conduct an achievement test on social studies subject for social science teachers and 4) Schedule-cum-Questionnaire used as classroom observation tool. The total process of preparation of the questionnaire was divided into three phases.

Phase – I: Preparation of the schedules and questionnaires

After discussing with the guide and gone through some earlier studies of NCERT, the researcher developed schedules and questionnaires, with some modifications for the present investigation and visited the schools under study. Then the investigator acquired a clear idea of the schools and teachers working in those institutions that are to be figured in this study. This exercise helped much in the designing of the schedules and questionnaire for the present study.

Since, the researcher adopted the schedules and questionnaires from the study NCERT-2009, the statements are containing with objective type answers, yes/no, rating scales with five-point scale. Each statement in the questionnaire has alternatives. The respondent requested to give their opinion by putting a tick (√) mark on any one of the alternatives. The investigator collected the information from teachers with the help of four types of tools. In the Schedule-1 there are 30 statements relating to SSA training programme, problems and prospects of the in-service training to teachers. In the Questionnaire2, there are 24 statements relating to general subjects by which the teachers express their opinions on different aspects of
in-service training programme. The questionnaire-3 deals with the opinions of the teachers on the social science subject and the Schedule-cum-Questionnaire-4 analyses the classroom observation by the researcher. Each statement followed by alternative answers and some statements followed by rating with scales. The options for responding to each item were observed according to their respective answers.

The following details pertaining the tools used in the present study for data collection.

1) **Trainees Perception about In-Service Training Schedule**: This schedule is used to obtain personal information about teachers i.e., age, sex, caste, area, academic/professional qualification and teaching experience, training programmes attended and classroom situation etc., A well structured questionnaire-cum-schedule, is designed to assess the teachers’ perception applied to collect the data from the respondents (teachers). The questionnaire is based on the following aspects like training needs, physical facilities, training modules, training material, resource persons, comments on training programmes, strengths and weakness of trainings.

2) **Achievement Test on general studies for Upper Primary Teachers Questionnaire**: In this questionnaire there are 24 questions relating to the general knowledge on school, students and teaching. In this questionnaire each statement is having four alternatives and the respondent (teacher) has to put a tick (✓) mark against one of the alternatives.

3) **Achievement Test on Social Studies for Upper Primary Teachers Questionnaire**: In this questionnaire there are 20 questions relating to the social science subject. In this questionnaire also each statement is having
four alternatives and the respondent (teacher) has to put a tick (√) mark against one of the alternatives.

4) Classroom Observation Schedule-cum-Questionnaire: A classroom observation schedule is developed to see the extent of impact of teacher training on actual classroom practices. The schedule comprised of the following components.

The first part of the schedule is Primary information – In this the details of the school, class and teacher has to presented by the observatory.

The second part of the schedule is divided by three sections.

Section – I: In this section there are two components, they are –
   a) Introduction of Lesson/lesson plans
   b) Combined class teaching

Section – II: In this section there are five statements and each one having number components. The response will be based on the five point scale method. These statements are -

   1. The practical activities performed for the students given by teachers;
   2. The condition of the teaching aids used by the teacher in the classroom;
   3. Class room performance;
   4. Guidelines to correct the faults;
   5. Valuation added planning.

Section – III: In this section there are two statements and each one having number components. The response will be based on the five point scale method. These statements are -
1. Environmental observation;
2. The level of planning in teaching.

**Phase – II: Administration of the tools**

After preparing the tools and subjecting it for the Research Guide approval, the final schedules and questionnaires were accepted and administered for data collection. Belonging that a mailed questionnaire would bring unsatisfactory results, the researcher personally visited the schools (upper primary) and administered the schedules and questionnaires from the selected school of the selected mandals in Visakhapatnam district. The researcher has collected 200 samples of ‘Trainees Perception about In-service Training’ schedules, 200 samples of ‘General achievement test of upper primary teachers’ questionnaires, 60 samples of ‘Achievement test in Social Studies for upper primary teachers’ questionnaires and finally 20 classroom observation schedules for this present study. These samples were collected with the help of teachers from the sample schools in the selected four mandals on the basis of equal sampling method. The same method of sampling is presented in the following tables and charts.

**3.6 Process and procedure of investigation**

The method of investigation depends upon the purpose of the study. The present investigation aims to evaluate the impact of in-service teacher training under SSA in classroom interaction in Visakhapatnam district. It attempts to ascertain the factors from teachers and classroom observations for the successful functioning of upper primary schools and their impact on
the performance of the teachers and finally evaluate the development of upper primary education in the study area.

The teachers are coming to the schools, which are located in urban, rural and tribal areas where the functioning of teaching is performed for the improvement of literacy levels of those areas. The main aim of the study is to investigate the impact of the in-service training through SSA in classroom interaction of the upper primary education at grass root levels of the education system study areas. The study also focuses on the performance of upper primary school teachers on achievement of classroom interaction. In this connection the researcher has taken up four mandals viz. Visakhapatnam (urban), Gajuwaka (semi-urban), Anakapalli (rural), and Paderu (tribal) in Visakhapatnam district as the areas for investigation. The varied nature of the study demands at least a semi-cultural group, which is in touch with the literacy rather than a sample from remote rural areas. Apart from this, the areas selected for the study were accessible to the investigator, which in turn provided facility for data collection.

The investigator collected the views from teachers who are related to the topic “Study on impact of in-service teacher training under SSA in classroom interaction”. The nature of the study required personal participation of the researcher for collecting the required information from the teachers and schools. A random sampling method of research after careful consideration is chosen to study the problem. This research study includes four phases: (1) Method of Investigation (2) Measurement of Variables for the Study (3) Data Collection and (4) Data Analysis.
3.7 Sample

**Random Sampling Method:** Of all the methods of sampling procedure, the commonly used method in surveys is random sampling. This technique is used to reduce the population heterogeneity and to increase the efficiency of the estimates. Stratification means divisions into groups. In this method the population is divided into a number of subgroups or strata. The strata should be so formed that each strontium homogeneous as far as possible. Then from each stratum a simple random sample may be selected and these are combined together to form the required sample from the population.

A sample is a small proportion of a population selected for observation and analysis. Much care has been taken while selecting the sample for the study. The size of the sample is 200 upper primary school teachers for trainees’ perception about in-service training, 200 teachers for achievement test on general studies, 60 social study teachers for achievement test in social study subject and 20 schedules for classroom observation sample which are situated in the selected area. This sample was selected from four mandals from different localities in Visakhapatnam district. These sample mandals are selected randomly in four areas, viz. Visakhapatnam mandal (urban area), Gajuwaka mandal (semi-urban area), Anakapalli mandal (rural area) and Paderu mandal (tribal area). The schools and teachers were identified and the required sample was drawn using a stratified random selection. The researcher visited continuously to distribute and collect the questionnaires and necessary information from the teachers of the study schools were collected and documented.
Figure 3.1

Trainees’ Perception about In-Service Training and Achievement Test

- Teachers: 200
  - Visakhapatnam: 50
    - Male: 30, Female: 20
  - Gajuwaka: 50
    - Male: 30, Female: 20
  - Anakapalli: 50
    - Male: 30, Female: 20
  - Paderu: 50
    - Male: 30, Female: 20
Figure 3.2

Classroom Observation Schedule

- Observations: 20
  - Visakhapatnam: 5
    - Male: 3
    - Female: 2
  - Gajuwaka: 5
    - Male: 3
    - Female: 2
  - Anakapalli: 5
    - Male: 3
    - Female: 2
  - Paderu: 5
    - Male: 3
    - Female: 2
3.8 Variables

Analysis of data on the basis of variables will certainly provide an opportunity to arrive at an accurate and authentic conclusion. So for studying the present problem in detail, the following Independent and dependent variables were studied.

A. The independent variables

The following independent variables were studied for teachers. They are location of the school, age, gender, social category, academic qualification, professional qualification and teaching experience.

B. The dependent variables

The opinions of the respondents were collected with the help of questionnaire relating to in-service training. The response of the teachers regarding in-service training, training facilities, difficulties at training and classroom interaction are measured as dependent variables. Along with these the results of achievement test conducted to the teachers are also taken as dependent variables in this study. These statements are with alternative answers for easy response and according to the response of the teachers the results were constructed. Some of the statement in the teacher’s questionnaire measured with the help of a five-point rating scale i.e. 5 through 1, where 5 indicate highest rating and 1 indicate lowest rating against the statement. In addition to this, in the observation questionnaire, there are some questions are related to performance of the teachers in the view of students, some are to know the performance of the teacher in the
view of investigator, some are relating to observations of the investigator about the students’ response towards the teaching lessons.

Through these statements the investigator wanted to identify:

- The opinion of the teachers on the in-service training facilities and merits and demerits of the training programme under SSA for quality improvement in secondary education.
- Impact of in-service training on classroom interaction at upper primary level.
- Views of the respondents on the in-service training programme under SSA.
- Advantages and disadvantages of the SSA Programme.

3.9 Statistical techniques used

The data collected on the basis of the tools administered to respondent was analyzed statistically. In this study the conclusions have been drawn on the basis of results deciphered after applying the tools of statistical analysis so as to make the study empirical. Percentage and average scores for various indicators were calculated. The analysis of the data has been done with the help of appropriate diagrams and graphics. It can be stated with fair degree of authenticity that this study is free from personal prejudices and an utmost care has been taken to establish the conclusions.

Primary data were entered using SPSS (Statistical Package for Social Sciences) software and STATISTICA. Uni-variate and bi-variate tables were generated and F-tests and t-tests were carried out for testing the hypothesis.
A. The F–test or the variance ratio test

The F–test is named in honor of the great statistician R.A. Fisher. The object of the F–test is to find out whether the two independent estimates of population variance differ significantly, or whether the two samples may be regarded as drawn from the normal populations having the same variance. For carrying out the test of significance, the F ratio is calculated. F is defined as

\[ F = \frac{S_1^2}{S_2^2} \text{ where } S_1^2 = \frac{\sum (X_1 - \bar{X}_1)^2}{n_1 - 1} \]

And \[ S_2^2 = \frac{\sum (X_2 - \bar{X}_2)^2}{n_2 - 1} \]

It should be noted that \( S_1^2 \) is always the larger estimate of variance, i.e., \( S_1^2 > S_2^2 \)

\[ F = \frac{\text{Larger estimate of variance}}{\text{Smaller estimate of variance}} \]

\[ V_1 = n_1 - 1 \text{ and } V_2 = n_2 - 1 \]

\( V_1 = \) Degrees of freedom for sample having larger variance.

\( V_2 = \) Degree of freedom for sample having smaller variance.

The calculated value of F is compared with the table value for \( V_1 \) and \( V_2 \) at 5% or 1% level of significance. If the calculated value of F is greater than the table value, then the F ratio is considered significant and the null hypothesis is rejected. On the other hand, if the calculated value of F is less
than the table value the null hypothesis is accepted and it is inferred that both the samples have come from the population having the same variance.

Since F test is based on the ratio of two variances, it is also known as the variance ratio test. The ratio of two variances follows a distribution called the F distribution named after the famous statistician - R.A., Fisher

B. The t-test

The student’s t-distribution is an important statistical tool as number of application in statistics. The following are some of them;

1. t–test for significance for single means, population variables being unknown.
2. t–test for the significance of the difference between two sample means, the population variance being equal but unknown.
3. t–test for significance of an observed sample correlation coefficient

In this analysis the investigator has used the t–test for testing the significance of the difference between two sample means.

The formulae used for this test is

\[ t = \frac{\bar{X} - \bar{Y}}{S \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \sim tn_1 + n_2 - 2 \]

Where \( \bar{X} = \frac{1}{n_1} \sum X \), \( \bar{Y} = \frac{1}{n_2} \sum Y \)
Analysis of data means studying the tabulated material in order to determine inherent facts or meanings. The acquired data was given simple statistical treatment and presented in the form of cross tables.

The interpretations of tables are given under each table with Chi-square values. The following chapters of the study contain the tabulations of data, analysis and their interpretation.

3.10 Geographical Area of Study

Visakhapatnam is a rare mixture of a city with a magical past and vibrant present. Emerald waters, cerulean skies, long sandy beaches set against a backdrop of low hills and creeks, Visakhapatnam is truly a gemstone on the East coast of India. A flourishing industrial natural harbor, the nation’s largest shipbuilding yard, the largest beach road, India’s most powerful lighthouse and the world’s highest broad gauge railway track can be found here.

Visakhapatnam is named after a temple deity Lord Visakha. In the 11th Century, a Hindu King built a monument called ‘Visakheswara’ at the south of Lawson’s bay, dedicated to Lord Visakha, on his way to Benaras. Later, this place became to known as Visakheswarapuram, which ultimately changed as Visakhapatnam. The history of this beautiful town can be traced back to the early days. It was a small fishing village in the Kalinga Empire.
during the reign of Ashoka the Great (272-232BC). Later on this port town passed successively from the Andhra Kings of Vengi to the Pallavas, Cholas and the Gangas, before it became a part of the Vizayanagar Empire in the 15th Century. But it was ultimately the British who converted it into a flourishing port town on the Eastern Coast.

**Geographical Area**

Situated among a “Picturesque amphitheatre of hills”, the port city of Visakhapatnam is the second largest city in Andhra Pradesh. It is situated at Latitude of 17° – 15’ north and longitude of 83° – 31 East on the east coast of India along the Bay of Bengal. It is equidistant from Chennai (840km) and Kolkata (866km). It is delimited on the north partially by Orissa state and by Vizianagaram district, on the South by the East Godavari district, on the West by Orissa state and on the east by the Bay of Bengal. The geographical area of Visakhapatnam district is 11,161 sq km, which occupies 4.1 per cent of the gross area of the State. It has 452 sq km of urban area and 10709 sq km of rural area. The district is covered with 132Km length of coastline. The Visakhapatnam district is segregated into Three Revenue divisions as Narsipatnam, Paderu and Visakhapatnam for administrative accessibility. There are 43 mandals, 929 non-notified panchayats and 47 notified gram panchayats. There are 3108 inhabited villages and 186 uninhabited villages. There are 10 towns, 4 municipalities including corporation.
Figure 3.3
Visakhapatnam District

<table>
<thead>
<tr>
<th>Mandal Code</th>
<th>Mandal Name</th>
<th>Mandal Code</th>
<th>Mandal Name</th>
<th>Mandal Code</th>
<th>Mandal Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Munchingiputtu</td>
<td>15</td>
<td>Golugonda</td>
<td>29</td>
<td>Visakhapatnam (U)</td>
</tr>
<tr>
<td>2</td>
<td>Pedabayalu</td>
<td>16</td>
<td>Nathavaram</td>
<td>30</td>
<td>Gajuwaka</td>
</tr>
<tr>
<td>3</td>
<td>Hukumpetau</td>
<td>17</td>
<td>Narsipatnam</td>
<td>31</td>
<td>Pedagantyada</td>
</tr>
<tr>
<td>4</td>
<td>Dumbriguda</td>
<td>18</td>
<td>Rolugunta</td>
<td>32</td>
<td>Paravada</td>
</tr>
<tr>
<td>5</td>
<td>Arakuvalley</td>
<td>19</td>
<td>Ravikamatham</td>
<td>33</td>
<td>Anakapalli</td>
</tr>
<tr>
<td>6</td>
<td>Ananthagiri</td>
<td>20</td>
<td>Butchayyapeta</td>
<td>34</td>
<td>Munagapaka</td>
</tr>
<tr>
<td>7</td>
<td>Devarapalle</td>
<td>21</td>
<td>Chodavaram</td>
<td>35</td>
<td>Kasimkota</td>
</tr>
<tr>
<td>8</td>
<td>Cheedikada</td>
<td>22</td>
<td>K Kotapadu</td>
<td>36</td>
<td>Makavarapalem</td>
</tr>
<tr>
<td>9</td>
<td>Madugula</td>
<td>23</td>
<td>Sabbavaram</td>
<td>37</td>
<td>Kotauratla</td>
</tr>
<tr>
<td>10</td>
<td>Paderu</td>
<td>24</td>
<td>Pendurthi</td>
<td>38</td>
<td>Payakaraopeta</td>
</tr>
<tr>
<td>11</td>
<td>Gangaraju</td>
<td>25</td>
<td>Anandapuram</td>
<td>39</td>
<td>Nakkapalli</td>
</tr>
<tr>
<td>12</td>
<td>Chintapalle</td>
<td>26</td>
<td>Padmanabham</td>
<td>40</td>
<td>S. Rayavaram</td>
</tr>
<tr>
<td>13</td>
<td>Gudemkotheveedhi</td>
<td>27</td>
<td>Bheemunipatnam</td>
<td>41</td>
<td>Yelamanchili</td>
</tr>
<tr>
<td>14</td>
<td>Koyyuru</td>
<td>28</td>
<td>Visakhapatnam</td>
<td>42</td>
<td>Rambilli</td>
</tr>
<tr>
<td>15</td>
<td>Golugonda</td>
<td>29</td>
<td>Visakhapatnam</td>
<td>43</td>
<td>Atchutapuram</td>
</tr>
</tbody>
</table>
**Climate:** The district has deferring climatic conditions in the different parts of it. Near coast, the air is moist and relaxing but gets warmer towards the interior and cools down in the hilly areas on the account of elevation and vegetation. April to June are the warmest months. The temperature (at Visakhapatnam Airport) gets down with the onset of South-East Monsoon and tumbles to a mean minimum of 19.8°C by January, after which there is reversal trend till the temperature reaches mean maximum of 34.7°C by the end of May.

**Rivers:** The chief rivers in the district are Machkund, Sarada, Varaha and Tandava. The rivulets are Meghadri Gedda and Gambheeram Gedda. Since no major irrigation system exists in the district, no significant sub-regional variations are apparent here.

**Rainfall:** The district receives annual normal rainfall of 1,202 mm. South-West Monsoon accounts for 70.9% of the normal rain fall while North-East Monsoon contributes 8.6% of the normal rain fall during 2003-2004. The rest is shared by the summer showers and winter rains. Agency and inland mandals receive larger rainfall from the South-West

**Population:** The population of the district is 4,288,113 as per recent census reports and this constituted 5.00% of the population of the state. The total male population of the district is 2,140,872, which is 5.26% of the state male population. There are 2,147,241 females in the district, which comes to 5.31% of the state female population. The district constitutes 49.91% of male and 50.09% of female. The sex ratio in the district is 1019 females per 1,000 males. The district has a density of population of 386 per sq km.
Agency areas show lesser density whereas the plain area shows higher density and 39.88% of the population resides in the 10 hierarchic urban settlements while the rest is distributed in 3,082 villages. The district has a workforce of 13.15 lakhs constituting about 40.02% of the population besides the marginal workers to the tune of 1.01 workers.

**Table-3.1: Population in Rural and Urban areas of Visakhapatnam district**

<table>
<thead>
<tr>
<th>Region</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>1,113,637</td>
<td>1,137,018</td>
<td>2,250,655</td>
</tr>
<tr>
<td>Urban</td>
<td>1,027,235</td>
<td>1,010,223</td>
<td>2,037,458</td>
</tr>
<tr>
<td>Total</td>
<td>2,140,872</td>
<td>2,147,241</td>
<td>4,288,113</td>
</tr>
</tbody>
</table>

Source: Director of census operations, Hyderabad.

**Educational Facilities:** There are 3020 primary schools with 2.94 lakh children on enrolment, 345 Upper Primary schools with an enrolment of 0.97 lakh pupils, and 385 high schools with 1.94 lakh pupils on rolls. Apart from this there are 122 Junior/Degree colleges and professional Institutions with 0.85 lakh student enrolment. An overall there are 3,946 schools including elementary, upper primary and high schools in Visakhapatnam district. Besides this 148 junior colleges, 74-degree colleges and 11 post graduation collages. There is one university in this district, which produced eminent persons to the country, which established in 1926.
Table – 3.2: Educational Profile Visakhapatnam District

<table>
<thead>
<tr>
<th>Type of Institutions</th>
<th>No. of Educational Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>3020</td>
</tr>
<tr>
<td>Upper Primary</td>
<td>345</td>
</tr>
<tr>
<td>UGME</td>
<td>236</td>
</tr>
<tr>
<td>High School</td>
<td>385</td>
</tr>
<tr>
<td>Colleges</td>
<td></td>
</tr>
<tr>
<td>(Junior+Degree+PG)</td>
<td>233</td>
</tr>
<tr>
<td>C.T. School</td>
<td>1</td>
</tr>
<tr>
<td>Technical School</td>
<td>1</td>
</tr>
<tr>
<td>B.Ed. College</td>
<td>1</td>
</tr>
<tr>
<td>Central School</td>
<td>1</td>
</tr>
<tr>
<td>Blind School</td>
<td>2</td>
</tr>
<tr>
<td>Deaf &amp; Dumb school</td>
<td>1</td>
</tr>
</tbody>
</table>

Literacy

There are 59.45 per cent of literates from the total population of the district. Male literacy rate is 68.85 per cent whereas female literacy rate is 49.99 per cent. State average literacy rate is 61.11 percent. Visakhapatnam stands below the literacy rate with 59.45 percent. When compared with other districts of Andhra Pradesh Hyderabad secured first position with 79.04 percent and Mahbubnagar is in last position with 45.53 percent.
Table-3.3: Literacy rate in urban and rural areas of Visakhapatnam district

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>5800399 (58.70)</td>
<td>364891 (36.78)</td>
<td>6165290</td>
</tr>
<tr>
<td>Urban</td>
<td>5706887 (83.46)</td>
<td>465237 (69.59)</td>
<td>622624 (76.60)</td>
</tr>
<tr>
<td>Total</td>
<td>1151086 (68.85)</td>
<td>830128 (49.99)</td>
<td>1981214 (59.45)</td>
</tr>
</tbody>
</table>

Figure 3.4

Studied state
Figure 3.5

Studied District