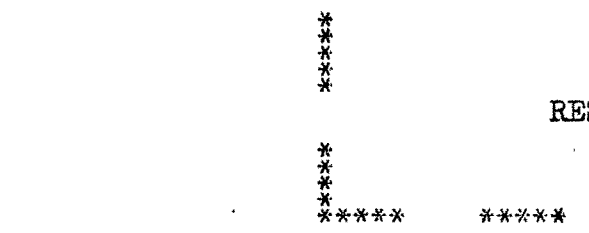
CHAPTER III



RESEARCH METHODOLOGY

III

RESEARCH METHODOLOGY

3.0.0 Introduction

In the previous chapter the researches carried out in the area of change, change agent, and role of a teacher in foreign countries and in India have been reviewed. In this chapter the details regarding the study undertaken are presented. To make the further reading easier to comprehend, the problem of the study is restated again (refer caption 1.7). The problem is to study how an Indian teacher is perceived by the teachers, the pupils, the members of the community, and the officials (authority), as a change agent.

3.1.0 Nature of the Present Research

Research is an intellectual activity which focuses an establishing new knowledge and discovering new truths concerning certain event or events with the purpose of furthering or verifying knowledge in order to enable the researcher to understand, predict and control the events of

the world. Research is this, not a mere search for truth but it is a meaningful and intensive search. It is more authentic and valid than the knowledge based on the evidence of tradition, learned authority, and personal experience.

In certain areas where sufficient research has not been done and where spade work is needed, the type of researches done in these areas are exploratory in nature. Studies related to the role of a teacher as a change agent, especially in India have been scanty. There are, of course, a few studies on teachers as change agents by Dube (1968). Banerjee (1962), Sood (1966), Salgaonkar and Patel (1970). As regards the role of a teacher a study has been made by Shah (1969). Such studies are sporadic, to draw any major conclusions about the role of a teacher as a change agent. More spade work is needed in this direction and as has already been discussed earlier, the present study is one such attempt.

3.2.0 Method of Research

The present study aims at studying the role of the teacher as a change agent as perceived by himself, pupils, the community and educational authorities. In absence of any pointed studies in India in this area the investigator formulated

null hypotheses. The hypotheses are formulated as under.

(i) There is no significant difference between the perception of the teachers and the pupils regarding the role of the teacher as change agents with respect to the nine dimensions, (i) literacy, (ii) customs and taboos, (iii) political education or creating political awareness, (iv) use of science in everyday life, (v) working for population policy, (vi) economic life of the society, (vii) to make education more scientific, (viii) implementation of government schemes, and (ix) social relations.

(ii) There is no significant difference between the perception of the teacher and community regarding the role of the teacher as change agent with respect to the nine dimensions, (i) literacy, (ii) customs and taboos, (iii) political education or creating political awareness, (iv) use of science in everyday life, (v) working for population policy, (iv) economic life of the society, (vii) to make education more scientific, (viii) implementation of government schemes, and (ix) social relations.

(iii) There is no significant difference between the perception of the teachers and the authorities regarding the role of the teacher as change agent with respect to the nine

dimensions, (i) literacy, (ii) customs and taboos, (iii) political education or creating political awareness, (iv) use of science in everyday life, (v) working for population policy, (vi) economic life of the society, (vii) to make education more scientific, (viii) implementation of government schemes, and (ix) social relations.

(iv) There is no significant difference between the perception of the pupils and the community regarding the role of the teacher as change agent with respect to the nine dimensions, (i) literacy, (ii) customs and taboos, (iii) political education or creating political awareness, (iv) use of science in everyday life, (v) working for population policy, (vi) economic life of the society, (vii) to make education more scientific, (viii) implementation of government schemes, and (ix) social relations.

(v) There is no significant difference between the perception of the pupils and the authorities regarding the role of the teacher as change agent with respect to the nine dimensions, (i) literacy, (ii) customs and taboos, (iii) political education or creating political awareness, (iv) use of science in everyday life, (v) working for population policy, (vi) economic life of the society, (vii) to make education more scientific,

(viii) implementation of government schemes, and (ix) social relations.

(vi) There is no significant difference between the perception of the community and authorities regarding the role of the teacher as change agent with respect to the nine dimensions, (i) literacy, (ii) customs and taboos, (iii) political education or creating political awareness, (iv) use of science in everyday life, (v) working for population policy, (vi) economic life of the society, (vii) to make education more scientific, (viii) implementation of government schemes, and (ix) social relations.

Sample :

The sample has been selected from four different populations. The first population consist of all the school teachers of Kaira district the total number of teachers in the secondary schools is about 4365. Out of these four hundred teachers male and female, from schools located in cities, towns and villages were selected on a random bases. Again four hundred and twenty pupils of standard IXth and XIth from the schools from where the teachers were selected were included in the sample. The community sample consisted of two hundred and eighty members. The sample was

selected on the basis of convenience and co-operation. The authorities included District Educational Officer, Assistant Deputy Educational Inspectors,and Administrative Officers.

The details about the sample are discussed elsewhere in this chapter.

Statistical Technique Used :

Descriptive statistics for the data were calculated, these included the mean and the standard deviation. 't' test has been used for testing the significance of difference between the means.

The procedure includes, (i) development of instrument - pre-tryout - tryout, item analysis and selection of items, (ii) the final data collection, and (iii) analysis of data and discussion of results.

3.2.1 Development of the Instrument

The instrument developed for the present study consists of nine perception scales. Each scale measures the perceptions of the respondent in the nine dimensions, viz., (i) literacy, (ii) customs and taboos, (iii) political

education or creating political awareness, (iv) use of science in everyday life, (v) working for population policy, (vi) economic life of the society, (vii) to make education more scientific, (viii) implementation of government schemes, and (ix) social relations.

Each scale has been constructed on the line of Likert type. In this type of scales, the respondent is instructed to make one of the five alternative responses, given against each statement. In this case against each statement five alternatives are given, they are Always, Frequently, Occasionally, Hardly and Never. For each dimension a number of statements were developed. This was done on the basis of the review of literature and study of different instruments of similar nature.

A brief rational for each of the nine dimensions is given in the next paragraphs.

(i) Literacy :

According to Radhakrishnan 'Democracy only provides that all men should have equal opportunities for the development of their unequal talents.' (Times of India, Sept.17, 1970).

In the attainment of mass literacy in India we are faced with two-fold major problems. One is regarding the education of those who do not get any education during the school going age and the other is regarding education of the children of school going age. The literacy to those who have been unfortunate to get any schooling during their childhood can be provided through adult education programme. Recently, the emphasis on adult education has been emphasised and it has been given a major focus in the programme of National Adult Education Programme (NAEP). Adult education is provided to develop vocational capabilities of the individuals, to ensure the physical development of the individuals through the teaching of basic principles of health, child health, prevention from diseases, balanced diet, cure of minor ailments and so on. It teaches how to harmonise with environment and make the best use of available physical conditions. It gives literacy so that knowledge of the world may become accessible to an individual. It obtains some insight into the affairs of the world and an individual can help his government to fulfil his programme. The third and important problem of mass literacy is the problem of neo-literates. In a democratic country like India, spread of literacy is one of the essential functions and important responsibility of the

government. So the government has given priority to adult education and mass literacy programmes. Jilla Shikshan Samiti and gram panchayat can provide small books with pictures, alphabets and letters or these types of books can be provided by Jilla Sikshan Samiti with the help of mobile library. The teacher can encourage the neo-literate to take advantage of this library. He can also write slogans on walls to maintain interest in literacy programme.

The role of a teacher in the programme of adult education is important, through this programme he can bring about a major social change, literacy therefore, has been considered as an important dimension in studying, the role of the teacher as a change agent.

(ii) Customs and Taboos :

India is a land of more than six huhdred million people of various castes and creed. A rich diversity in customs, taboos, and traditions could be noted. Though not all, some of these can be considered to be having an evil influence on the society. To mention a few, untouchability and Dhej (Dowry system) are still widely prevalent in the society. If the nation has to come out from wrong customs, taboos and traditions, the teacher must play an important role. His role

does not restrict itself to the classroom but extends to the society as well.

(iii) Political Education or Creating Political Awareness :

The preamble of Indian Constitution clearly mentions that the democratic form of government is to be the pattern of the government in India. Here justice, liberty, equality and fraternity are given as the fundamental rights to all the citizens. On account of the illiteracy of the people and the lack of social education, democracy is being replaced by the dictatorship in a number of countries in Asia and Africa. India being a vast democratic country, there is a vital need for proper social education which makes conversant the citizens with the democratic ideals and develop in them those qualities which are most needed in organizing a democratic society. The main aim of social education is the harmonious development of the individuality of the citizens. The education is required to develop such a personality which remains alive to the rights and duties and has ability to discharge responsibilities adequately. Every citizen must develop a capacity to understand the social, economic, and political problems of the country. He should be

made free from superstitutions, and his reasoning power should be made acute. The school is a formal agency of education where the teacher imparts the education. The teacher is also one of the informal agents in the society and he can he helpful in healthy and desirable development of public consciousness.

(iv) Use of Science in Everyday Life :

In India the neglect of Science and technology can be considered to be another factor responsible for her slow progress and change. The economic well-being of a nation depends upon the man power, and the judicious use of its natural resources. A nation's wealth is in its people, with highly developed skills, abilities and who have also a general and flexible education which may enable them to adapt themselves rapidly to changing circumstances. So the teacher should develop scientific attitudes in the pupils.

(v) Working for Population Policy :

The control of birth has become a very vital issue before the country. On it depends all the progress and development of the country in economic, educational, or social spheres. But the major difficulty is how to achieve it. The

The Indian society is still much backward to realise fully the importance of this. The chief barriers in the acceptance of the idea of birth control, are religious barriers, socio-cultural barriers and economic barriers. These three barriers need to be broken or crossed, and this can only be done through proper social education. A change in religious beliefs, an alteration in the fertility concept and realization of what constitutes economic well-being can only lead to the population control. The social worker, the leader in the community, and the teacher, all have to combine their efforts in this direction.

(vi) Economic Life of the Society :

The present society is experiencing a technological and scientific revolution. So it has necessitated that every country should have an adequate number of qualified scientists, technologists, and technicians. Without an adequate supply of them, the country is bound to take a backward place in the race of progress. It has been established that agriculture in the modern times is as much a concern of scientists and technologists as that of the farmer. The mechanized farming, the researches on manures, soils and seeds, the multiplication of the means of irrigation have all established the necessity

of proper training and education, to those pupils who wish to take up purely an agricultural vocation. In the present times no nation can think of social or economic development without ensuring an abundant supply of highly educated and skilled people. Along with it the judicious investment of money of an individual for the progress of the country is also equally important. For socio-economic growth of the society the teacher can play an important role through education in schools and outside the schools.

(vii) To Make Education More Scientific :

Education in a free society is necessarily different from the education in a society which is bound by the rule of one or selected few. Education in a slave country differs widely from education in an independent country. No one is satisfied with the present state of Indian education. The system of teaching is traditional. Inspite of the facts that government spends a lot of budget for secondary education, the managing trustees and headmasters are not enlightened to take the advantage of it. Those who take advantage, pocket the money instead of using for the betterment of the pupils. The best use of the funds should be made and new devices like, television, radio, filmstrips, tape-recorder, and other audio-visual aids should be purchased and teachers should make the

best use of all such devices in his teaching. The teacher can inspire the pupils for the best advantage of such educational devices to get better knowledge.

(viii) Implementation of Government Schemes :

The major responsibility for bringing a change in the attitude lies upon the teacher. India is a democratic country. She is wedded to socialistic values. Moreover our constitution has given fundamental rights like equality, justice, and fraternity, without the bias of any caste, creed or colour. Indian government works for the upliftment of poor and the masses on a large scale. People and pupils do not take advantage of the government schemes, because they are not known to them. The enlightened teacher can guide the pupils and the people to take advantage of it. He can bring to the notice of the pupils such avenues as the merit scholarship examination, science talent examination and such others. The teacher can inspire the people of the backward communities, and economically backward people to take the advantage of the various schemes offered by the government for their children.

(ix) Social Relations :

In India, the organisation of education from the very beginning has been dependent on social factors. The social feelings have influenced the education and the education has kept the aim of social progress always in view. Among the aims of education, the individual and social development was considered the main goals. The sages in India have given the highest place to duty (Karma) thereby putting the social service feelings in the very grain of soil. But during the British regime, the Indian society was totally neglected. After independence many attempts are now being made to reform the educational system, so that it may prove to be very effective in bringing forward social progress and in maintaining social relations. The national integration can be achieved through closer cohesion between different social groups through cultural activities in which people of different social groups participate. The teacher can provide opportunities for it through cultural activities.

The number of items developed in each dimension is given in Table 3.1.

Table :3.1: Distribution of Items under Various Dimensions for the Pre-tryout Form of the Instrument

Sr.No.	Dimensions	No. of Items
1.	Literacy	14
2.	Customs and taboos	25
3.	Political education or creating political awareness	18
4.	Use of science in everyday life	13
5.	Working for population policy	15
6.	Economic life of the society	16
7.	To make education more scientific	7
8.	Implementation of government schemes	13
9.	Social relations	14
	Total	135

These 135 items covering the nine dimensions formed the pre-tryout form of the instrument (See Appendix I).

The following scoring key was developed :

Always, Frequently, Occasionally, Hardly and Never

Positive statements	4	3	2	1	0
Negative statements	0	1	2	3	4

3.2.2 Pre-tryout of the Instrument

The pre-tryout form of the instrument thus prepared was sent for suggestions and opinions to a sample of 16 persons consisting of (i) four teachers including a headmaster of Nadiad city, (ii) four of the teaching staff of the Education Department of The M.S. University of Baroda, Baroda, (iii) Three managing trustees of the schools of Nadiad city and Vaso Kelvani Mandal, Vaso. (iv) One A.D.E.I. Kaira District, and (v) A doctor, a lawyer and a mechant of Anand and Nadiad city. Out of the sixteen respondents only twelve responded with suggestions. After a careful study of the suggestions and opinions of the respondents, the items were revised and sixteen more items were included. Thus, the try-out form of the instrument included '151' items (See Appendix II) on nine dimensions and the items were to be rated on a five-point scale.

3.2.3 Try-out of the Instrument

According to Lindquist (1955), 'the preliminary administration of the tentative try-out units to a small sample is for purpose of discovering gross deficiencies, but with no intention of analysing pre-tryout data for individual items.'

The objectives of the tryout were as follows :

(i) To find out gross deficiencies in the items such as to the ambiguity of words or statements.

(ii) To find out the difficulties of the respondents in responding to the items.

(iii) To collect data for conducting the item analysis, and thus selecting the items for the final form of the instrument.

Keeping in view the objectives, the following sample from Nadiad city was selected for the tryout :

(i) A group of fifty secondary teachers (male and female) including headmasters, some of whom were highly qualified (M.A., M.Ed., M.A.; B.Ed., M.Sc.,M.Ed.; M.Sc.,B.Ed., B.A., B.Ed., B.Sc., B.Ed., B.Com.,B.Ed.) and with long experience.

(ii) Fifteen undergraduates and matriculate teachers working in primary section in the secondary schools.

(iii) Fifty pupils of standard Xth, they included both boys and girls, pupils from rural and urban areas, and pupils who were academically above average and below average in the class.

(iv) Fifty community members who included doctors, lawyers, merchants and street hawkers.

(v) Ten managing trustees of various schools.

(vi) Twenty five authorities like District Education Officer, Assistant District Education Officer, and Administrative Offier. (D.E.Os., A.D.E.Os., and A.Os.)

Thus, in all, there were 175 respondents, The try-out form of the instrument was given to each of the 175 respondents out of them only 150 returned the forms.

3.2.4 Item Analysis

The purpose of the analysis is to determine the discriminative value of each item and to establish the internal consistency of the tool. The method of extreme 27 % group has been used. The 't' value of every item was found out on a computer. The items having a value of 1.75 and more were selected to be included in the final form of the instrument. Table 3.2 gives the results of items analysis.

Table :3.2: Table showing 't' Values of 151 Items

Item No	't' Value	Remarks	Item No.	't' Value	Remarks
1	3.020	Selected	11	5.465	S
2.	1.551	Rejected	12	4.956	S
3.	3.435	S	13	3.190	S
4.	3.655	S	14	5.243	S
5.	2.574	S	15	4.378	S
6.	6.739	S	16	2.804	S
7.	3.502	S	17	4.249	S
8.	4.606	S	18	3.041	S
9	3.891	S	19	0.732	R
10	4.020	S	20	1.351	R

(Continued...)

(Table 3.2 continued)

Item No	't' Values	Remarks	Item No	't' Values	Remarks
21	0.000	Rejected	48	1.828	Selected
22	1.761	Selected	49	2.661	S
23	1.659	R	50	1.175	R
24	2.479	S	51	0.296	R
25	0.434	R	52	1.847	S
26	0.268	R	53	5.773	S
27	1.655	R	54	4.154	S
28	4.567	S	55	0.253	R
29	3.225	S	56	2.438	S
30	1.121	R	57	1.887	S
31	1.025	R	58	0.931	R
32	0.486	R	59	0.899	R
33	0.796	R	60	2.858	S
34	3.294	S	61	1.906	S
35	1.586	R	62	0.082	R
36	1.407	R	63	1.922	S
37	1.430	R	64	2.948	S
38	2.377	S	65	2.571	S
39	1.511	R	66	0.602	R
40	0.664	R	67	3.219	S
41	0.726	R	68	3.431	S
42	3.562	S	69	2.174	S
43	0.140	R	70	0.221	R
44	1.768	S	71	2.123	S
45	0.310	R	72	2.533	S
46	0.465	R	73	3.874	S
47	0.463	R	74	3.258	S

(Continued...)

(Table 3.2 continued)

Item No.	't' Value	Remarks
75	3.499	Selected
76	5.574	S
77	0.461	R
78	3.286	S
79	0.883	R
80	2.289	S
81	3.645	S
82	1.445	R
83	2.919	S
84	2.807	S
85	1.899	S
86	1.979	S
87	1.263	R
88	5.374	S
89	6.138	S
90	4.280	S
91	4.291	S
92	4.379	S
93	2.451	S
94	2.769	S
95	5.754	S
96	5.784	S
97	5.303	S
98	2.748	S
99	3.292	S
100	3.019	S
101	2.824	Selected
102	2.712	S
103	1.263	R
104	1.640	R
105	4.448	S
106	4.094	S
107	7.045	S
108	7.869	S
109	6.043	S
110	5.467	S
111	6.627	S
112	4.193	S
113	5.683	S
114	6.251	S
115	3.957	S
116	4.221	S
117	3.509	S
118	4.156	S
119	3.657	S
120	3.147	S
121	4.710	S
122	5.425	S
123	5.875	S
124	3.657	S
125	4.505	S
126	3.771	S

(Continued...)

(Table 3.2 continued)

Item No.	't' Value	Remarks
127	3.057	Selected
128	1.821	S
129	4.627	S
130	4.699	S
131	3.444	S
132	5.585	S
133	4.939	S
134	4.086	S
135	2.029	S
136	3.219	S
137	4.098	S
138	1.871	S
139	1.148	Rejected
140	2.168	S
141	0.621	R
142	2.590	S
143	3.621	S
144	2.723	S
145	2.898	S
146	3.342	S
147	3.040	S
148	2.657	S
149	0.230	R
150	1.037	R
151	1.011	R

S ==Selected R = Rejected

Thus, the final form of the instrument had 110 items. (See Appendix III).

The number of items in the tryout and final forms of the instrument according to the different dimensions are given below in Table 3.3

Table :3.3: Number of Items in the Tryout and Final Form of the Instrument according to the Different Dimensions

Sr. No.	Dimensions	No. of Items in Tryout Form	No. of Items in Final Form
1.	Literacy	14	13
2.	Customs and taboos	25	10
3.	Political education or creating political awareness	18	9
4.	Use of science in everyday life	13	8
5.	Working for population policy	15	12
6.	Economic life of the society	16	15
7.	To make education more scientific	23	21
8.	Implementation of government schemes	13	13
9.	Social relations	14	9
	Total	151	110

3.2.5 Validity and Reliability of the Instrument :

(a) Validity :

The validity of the instrument was established by ascertaining the validity of each item. The criterion for the validity was the judgement of experts. The list of 151 items was given to three experts from the M.S. University of Baroda. They were requested to give their opinion on each item as to whether the item was helpful in defining the teacher role as a change agent in the particular dimension. Eleven items were not approved by the experts. Six of them were reworded and five were replaced by other items. These eleven items were again screened by the three experts, to approve the same. Thus, content validity was established for the instrument.

(b) Reliability :

The reliability of the final form of the instrument was established for each dimension by using the test, re-test method. The forms were given to fifty teachers and scored. After a lapse of twenty days it was re-administered to the same group and scored. Product movement co-relation was calculated between the two sets of scores, the results are given in the table 3.4.

Table :3.4: Coefficients of Co-relation Between the Test and Re-test Scores

Sr.No.	Dimensions	Co-efficient of Correlation
1.	Literacy	0.83
2.	Customs and taboos	0.78
3.	Political education and creating political awareness	0.76
4.	Use of science in everyday life	0.85
5.	Working for population policy	0.82
6.	Economic life of the society	0.80
7.	To make education more scientific	0.77
8.	Implementation of government schemes	0.84
9.	Social relations	0.73

3.3.0 Main Field Study

The final form of the instrument developed was used to collect the required data for the problem under study. The details are discussed below.

3.4.0 Sample

The study has drawn its sample from Kaira district only. It consists of 10 talukas. Those talukas are divided into cities, nagars or towns and grams or villages according

the population of the place. A city consists of a population of more than 20,000 (i) (a) to be a nagar, if the population of such local areas exceeds 10,000 but does not exceed 20,000 and (b) to be a gram, if the population of such local areas does not exceed 10,000 Chauhan (1974), out of these 7 cities, 8 towns and 10 villages were randomly selected. The list of these are given below in Table 3.5.

Table :3.5: Names of City, Nagar, or Town and Gram or Village of Kaira District involved in the Main Field Study

Names of City	Names of Town or Nagar	Names of Village or Gram
1. Anand	1. Anklav	1. Antarsumba
2. Balasinor	2. Matar	2. Boriavi
3. Borsad	3. Mehmadabad	3. Dabhan
4. Kapadwanj	4. Sunav	4. Gada
5. Khambhat	5. Thashra	5. Haldarvas
6. Nadiad	6. Umreth	6. Sandhana
7. Petlad	7. Vaso	7. Vangrolee
	8. Virpur	8. Vansol
		9. Vatodra
		10. Virsad

The instrument was administered to :

(i) 400 male and female teachers including headmasters belonging to secondary schools;

(ii) 420 pupils from standards IXth and XIth including both boys and girls ;

(iii) 280 members of the community - 120 who were not officially concerned with the education but members of the managing committee. Jilla Shikshan Samiti, Board of Management and - 160 citizens who were not members of the managing trustees but those who sent their children to the schools, and

(iv) government officials including, District Educational Officer, Assistant District Educational Inspector and Administrative Officer and so on.

The returns of the forms were : 400 teachers, 400 pupils, 250 members of the community, and 50 persons of authority.

The following Table 3.6 shows the split of the respondents.

Table :3.6: Details showing the Distribution of Respondents in the Main Field Study

Respondents	Cities		Towns		Villages		Total
	Male	Female	Male	Female	Male	Female	
Teachers	100	40	95	25	115	25	400
Pupils	105	35	110	50	75	25	400
Members of the Community	65	25	80	25	39	16	250
Authority	20	05	18	03	4	-	50
Total	290	105	303	103	233	66	1100

The different categories of persons in the sample who returned the forms were further split up to get a better idea of the sample. These split-ups are given below :

Table :3.7: Split-Ups of the Sample

Teachers		Number
Graduates and Post-graduates		275
Undergraduates		125
	Total	400
Male		310
Female		90
	Total	400
Secondary Teachers		400

Pupils	Class IX		Class XI		Total
	Boys	Girls	Boys	Girls	
Pupils having secured more than 55% of marks	50	30	40	40	160
Pupils having secured less than 40% of marks but more than 35% of marks	80	40	80	40	240
Total	130	70	120	80	400

Members of the Community

Income Base	Male	Female	Total
Income more than Rs.10,000 per year	130	25	155
Income less than Rs.10,000 per year	50	45	95
Total	180	70	250

Professional Base	Total	
Doctors	55	
Engineers	20	
Lawyers	45	
Merchants	95	
Street Hawkers	35	Total 250

Political Status		
M.P.	3	
M.L.A.	7	
Municipal Presidents	7	
President of Gram Panchayat	17	
Trustees of School/ Hospital and Public Institutions	41	Total 75

Authorities (Officials)

Designations						
D.E.O.		A.D.I.		A.O.		Total
Male	Female	Male	Female	Male	Female	
1	-	35	7	6	1	50

3.5.0 Data Collection

The scales were administered to the sample and responses were collected. To get the maximum possible returns of the forms, the following precautions were taken :

(i) The investigator went personally to every city, town and village.

(ii) The respondents were requested to fill-up the forms in the presence of the investigator, so that any difficulties faced by them could be solved.

(iii) The purpose of the study was explained by the investigator to the respondents so as to get the responses without any bias or prejudice towards the teacher.

The analysis of the data and the discussion of the findings are presented in the next chapters.