

CHAPTER III

PLAN AND PROCEDURE OF THE STUDY

3.0 INTRODUCTION

The previous chapter of 'Review of Related Literature' provided an in-depth overview of research studies related to In-service Teacher Education Programme, research studies conducted abroad, research studies conducted in India, research studies related to DIETs and presented an overview of reviewed literature as well as located the research gaps on the basis of reviewed literature. The review of related literature led to the conclusion that little work has been done with respect to organization and implementation of in-service teachers training programmes in the State of Gujarat and a lot is to be done yet.

In view of this review, the present Study was planned with objectives as given below -

1. To study the different components of the ongoing in-service training programmes conducted by DIETs of Gujarat.
2. To identify the problems faced by DIET Lecturers/Teacher Educators in organizing in-service training programmes
3. To study the selection procedure of resource persons in the in-service teacher training programmes.
4. To study the views and reactions of the functionaries and beneficiaries of in-service training programmes in terms of:
 - Training needs,
 - Training materials and modules,
 - Transactional modalities, and
 - Planning, organization and implementation

To achieve the above mentioned objectives, the researcher executed a particular research design and the details of this is given in this chapter under the title 'Plan and Procedure of the Study'.

The present chapter encompasses various aspects of research methodology namely design of the study adopted by the researcher; selection of the population and sample, the sources of the data, tools employed for collecting the data and the appropriate research techniques used in the analysis of the data collected for the present Study.

3.1 DESIGN OF THE STUDY

Research method is an essential part of the research process.

The selection of the research method and the specific design within that method are dependent on the nature of research problem and the type of data required to explore it. Method of research refers to the formal sequence of actions which researcher uses in solving the targeted problem under investigation and achieving the desired results. Mouly (1978) has classified research methods into three basic types namely historical research, experimental research and descriptive research.

Descriptive Research Method is the method of describing and interpreting an incidence existing at present. Descriptive Research investigates phenomena in their natural setting and provides data about the population or universe being studied. It is used when the objective is to provide a systematic description that is as factual and accurate as possible. Descriptive research relies on qualitative and quantitative data gathered from written documents, personal interviews, test results, surveys etc.

As the objectives of the present research were to study the different components of the ongoing In-service Training Programmes conducted by DIETs of Gujarat; to identify the problems faced by DIET Lecturers in organization and implementation of In-service Training Programmes; to study the views and reactions of the functionaries and beneficiaries in terms of In-service Teachers Training Programmes as well as to study the selection procedure of resource persons in the In-service Teachers Training Programmes, the researcher obtained the responses of Teachers, Resource Persons, DIET Lecturers, DIET Principals and Head Teachers by the means of questionnaire and opinionnaire and observation schedule for DIET's In-service Teacher Training Programmes.

Thus, the researcher used 'Descriptive Research Method' in the present Study to provide a systematic description of existing status of in-service teachers' training programmes in the selected DIETs of Gujarat.

3.2 POPULATION OF THE STUDY

Population refers to any collection of specified group of human beings or non-human entities such as objects, educational institutions, geographical areas, etc.; population refers to this large group, called universe, from which the sample is selected.

All the DIETs, Primary school teachers, Resource Persons, Head Teachers and the DIET Principals and Lecturers in the State of Gujarat formed the population of this Study.

Primary school teachers, resource persons and head teachers consisted of all who had attended in-service training Programmes; DIET Principals and DIET faculties included principals, lecturers and senior lecturers.

3.3 SAMPLE OF THE STUDY

Sample selection is very important for any research work because it is difficult to study the entire population.

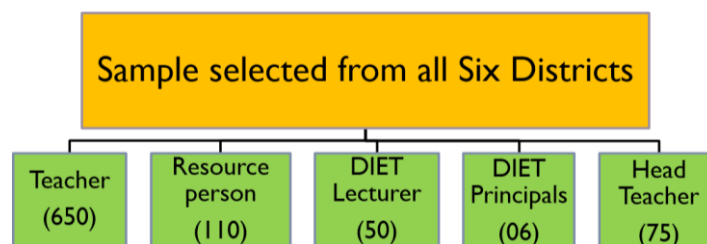
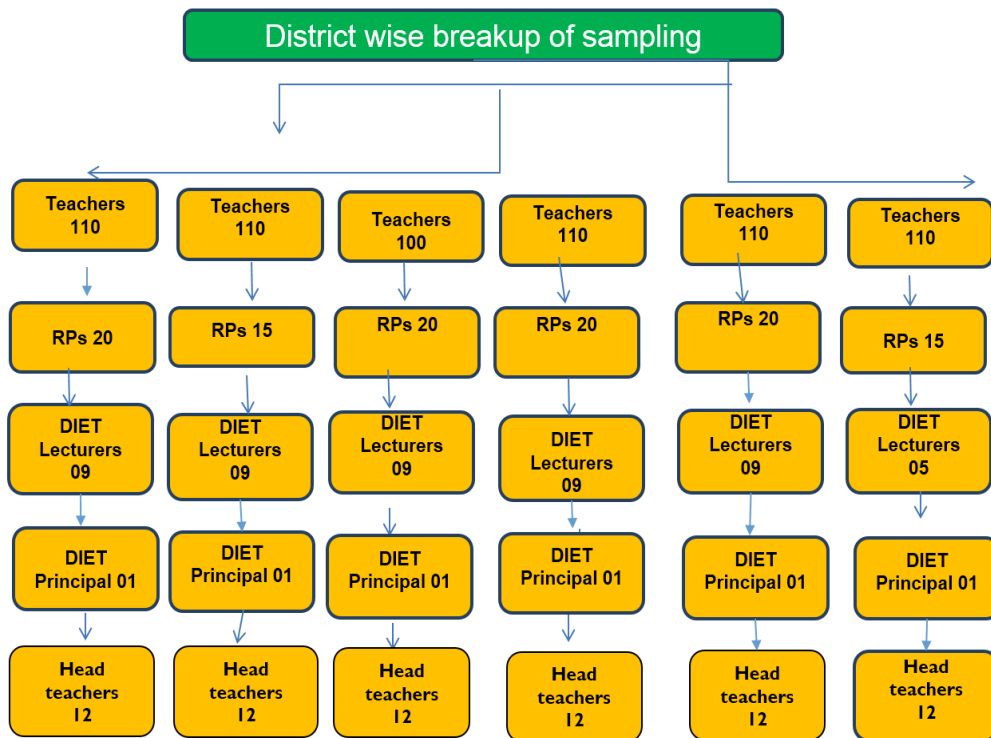
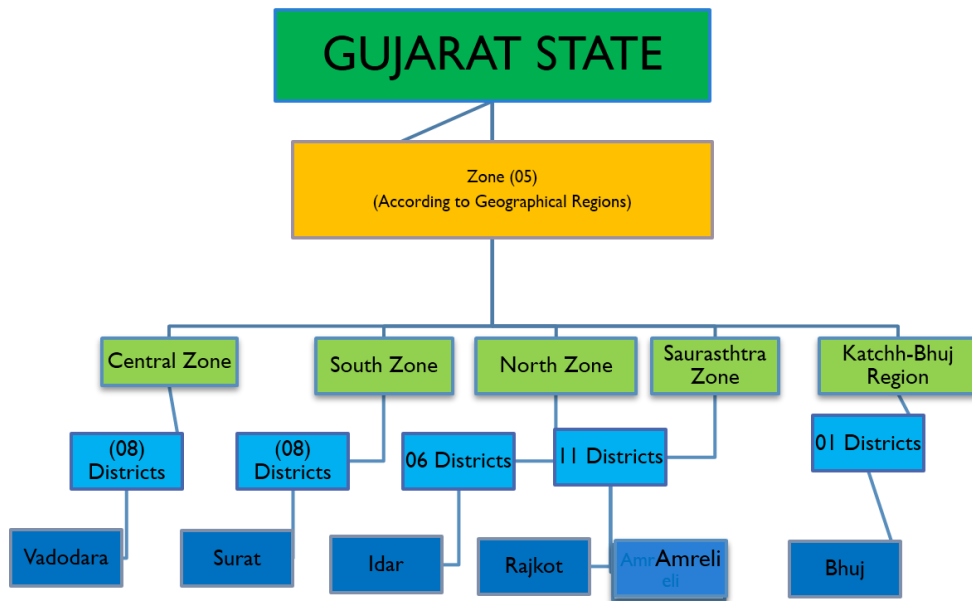
According to Desai (1992) “The small group selected from the population representing its characteristics is called sample”. The researcher used the stratified random sampling method to select the sample for the Study.

In the **first strata**, a list of DIETs was taken from GCERT and divided into five zones as per geographical areas of Gujarat. Presently there are 30 DIETs in the State of Gujarat.

The six DIETs selected randomly from each zone i.e. Central zone (Vadodara), South zone (Surat), North zone (Sabarkantha Idar), Saurashtra zone (Rajkot and Amreli) and Kachh Region (Bhuj). In Saurashtra zone, there were total 11 districts; so in this zone, two DIETs were selected. Thus, the following districts zone wise were selected for the present Study: (1) Surat, (2) Vadodara, (3) Sabarkantha, Idar, (4) Amreli, (5) Rajkot and (6) Kachh – Bhuj.

For the purpose of data, views and reactions of teachers, resource persons, head teachers, DIET Principals, lecturer & senior lecturers (male and female, rural and urban) from DIETs, government schools, were collected and analyzed.

SAMPLING FLOW CHART:



Selection of Teachers - teachers were selected from six DIETs of Vadodara, Surat, Idar, Rajkot, Amreli and Bhuj.

In the academic years 2018-2019; 2019-2020 total 13873, 15643, 17876, 18765, 8745 and 12607, primary school teachers had attended in-service training programmes conducted by DIETs of Vadodara, Surat, Idar, Rajkot, Amreli and Bhuj respectively.

Out of them 927, 1034, 1145, 1135, 1065 and 1108 teachers had attended in-service training programmes at least two times in Vadodara, Surat, Idar, Rajkot, Amreli and Bhuj respectively. These teachers were given the serial numbers and using random number table, 110 teachers were selected from each DIETs. In all, 650 teachers were selected to analyze the ongoing in-service training programmes and to study the views and reactions.

Selection of Resource Persons - in academic years 2018-2019 and 2019-2020, total 200, 130, 120, 125, 135 and 158 resource persons imparted their valuable services in the in-service training programmes conducted by Vadodara, Surat, Idar, Rajkot, Amreli and Bhuj DIETs respectively.

Out of these resource persons, twenty resource persons were selected from each DIET these resource persons were given the serial number and selected using random number table. In all 110 resource persons were selected (10 resource persons did not respond) to study their views and reactions regarding the selection procedure and other dimensions of the in-service training programmes.

Selection of Head Teachers - in academic years 2018-2019 and 2019-2020, total 50, 150, 115, 150, 120 and 124 Head Teachers were there in Vadodara, Surat, Idar, Rajkot, Amreli and Bhuj DIETs respectively; these Head Teachers were given the serial number and using random number table, 12 Head Teachers were selected from each DIETs.

In all, 72 Head Teachers were selected; 3 additional Head Teachers filled up their responses, thus total 75 head teachers were selected as a sample to know their views and reactions.

Selection of DIET Lecturers - in academic years 2018-2019 and 2019-2020, there were from six DIETs 15, 16, 10, 16, 9 and 10 DIET Lecturers/senior lecturers in Vadodara, Surat, Idar, Rajkot, Amreli and Bhuj DIETs respectively. These Lecturers were given serial number and out of them nine Lecturers were selected from each DIET.

In all 54 DIET lecturers and senior lecturers were selected as a sample; four lecturers did not respond. So total 50 teacher educators were selected as a sample for the Study.

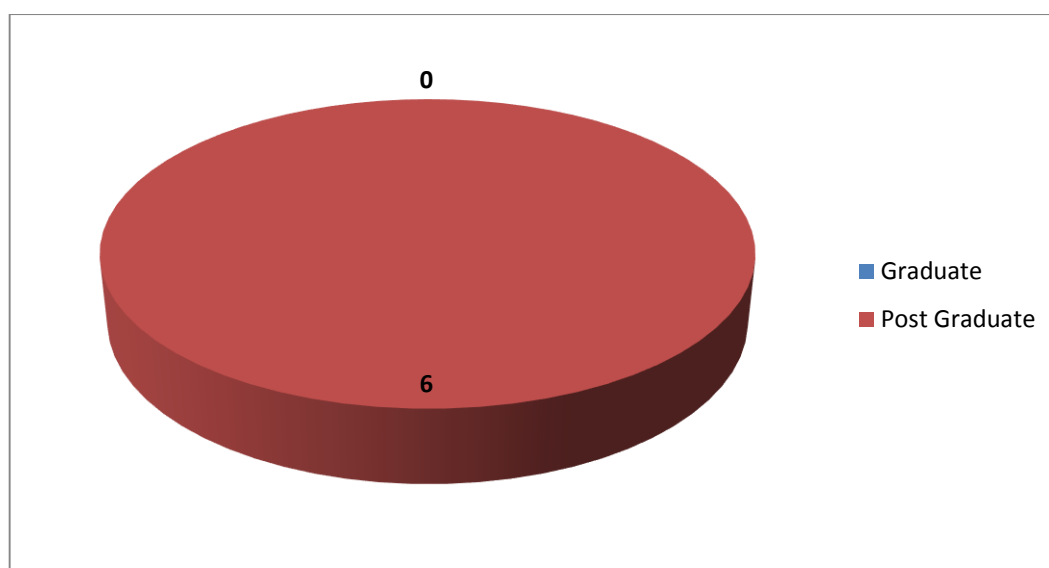
Selection of DIET Principals - all six DIET Principals who were there in academic years 2018-2019 and 2019-2020, were selected as a sample for the Study.

3.3.1 Demographic Profile of DIET Principals

Profile of fifteen respondent DIET principals has been presented in terms of their educational as well as professional qualifications and teaching experience in the form of following figures 3.1 to 3.3.

Figure 3.1

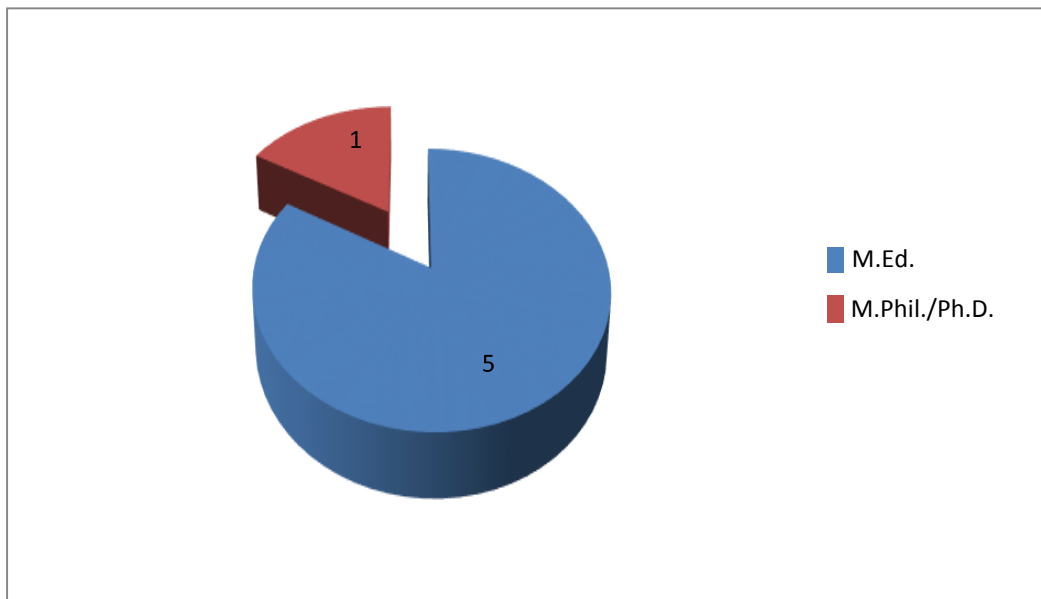
Education qualification wise distribution of the DIET principals



From the figure 3.1 it can be observed that out of 6 (100%) respondent DIET principals, all were having postgraduate qualification.

Figure 3.2

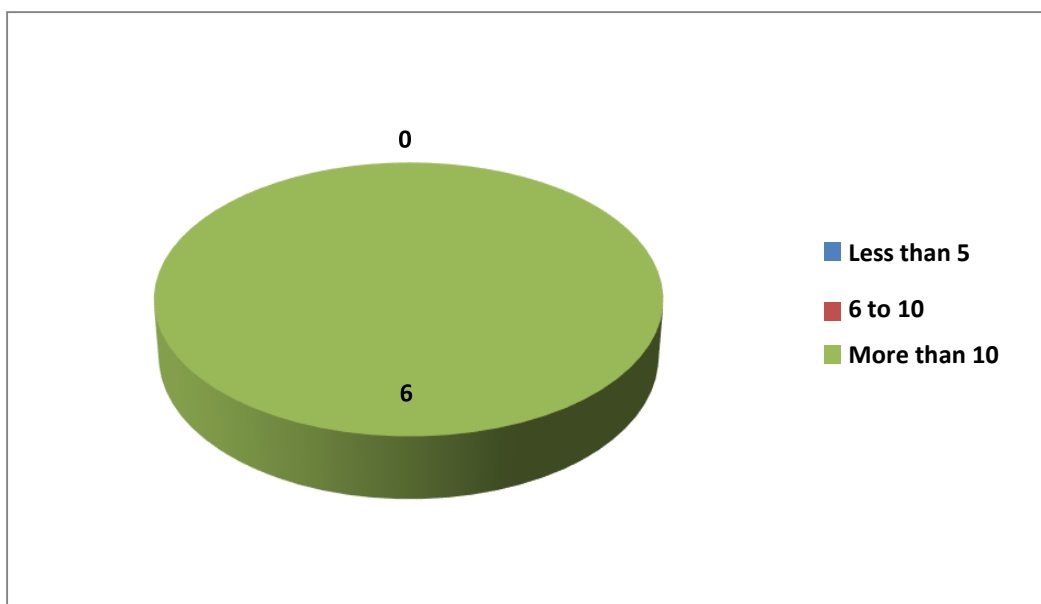
Professional qualification wise distribution of the DIET principals



From the figure 3.2 it can be observed that out of 6 (100%) respondent DIET principals, 5 (83%) were M.Ed. qualified and one was Ph.D. qualified.

Figure 3.3

Teaching experience wise distribution of the DIET principals



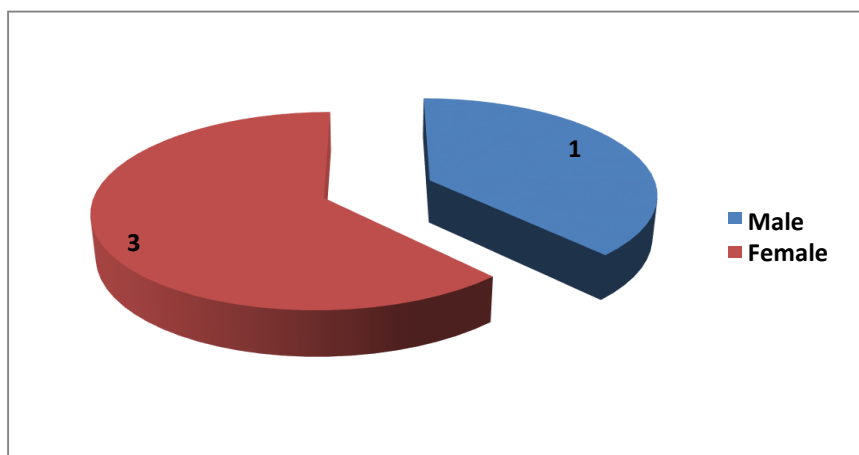
From the figure 3.3 it can be observed that out of 6 (100%) respondent DIET principals, all of them were having more than 10 years of teaching experience.

3.3.2 Demographic Profile of DIET Teacher Educators

Profile of 50 respondent teacher educators has been presented in terms of their gender, age-group, position, educational as well as professional qualifications and teaching experience in the following tables 3.4 to 3.9.

Figure 3.4

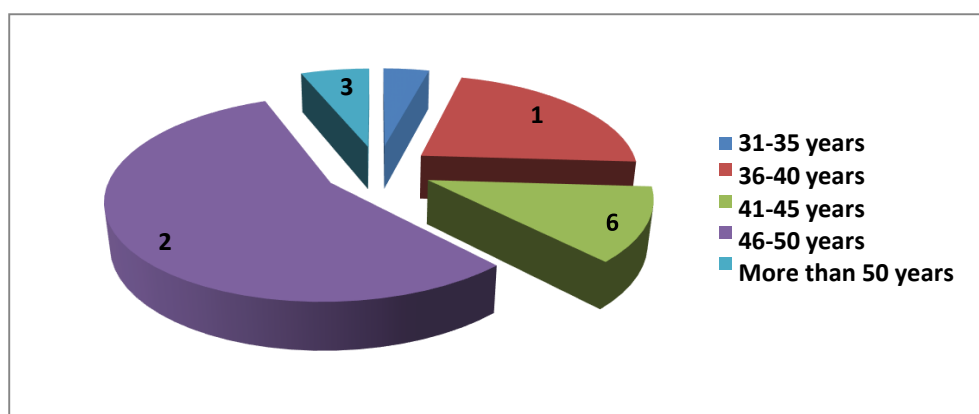
Gender wise distribution of the teacher educators



From the figure 3.4 it can be observed that out of the 50 (100%) respondent teacher educators, majority of them were female (62%) whereas 38% were male.

Figure 3.5

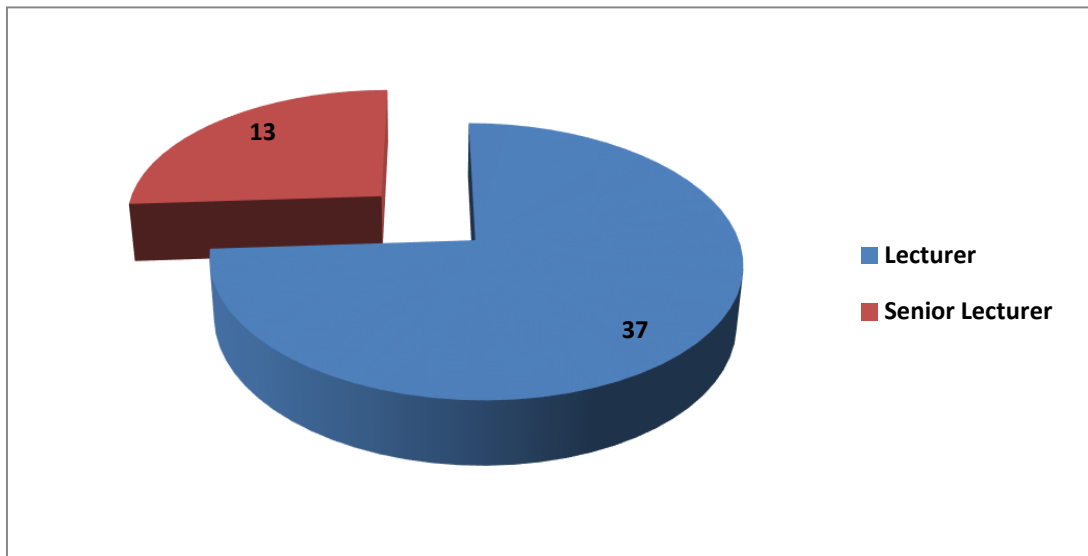
Age group wise distribution of the teacher educators



From the figure 3.5 it can be seen that out of 50 (100%) respondent teacher educators, 56% of them were of 46-50 years of age whereas only 4% of them were 31-35 years of age. The remaining teacher educators were in the age groups 36-40 years (22%), 41-45 years (12%) and more than 50 years of age (6%).

Figure 3.6

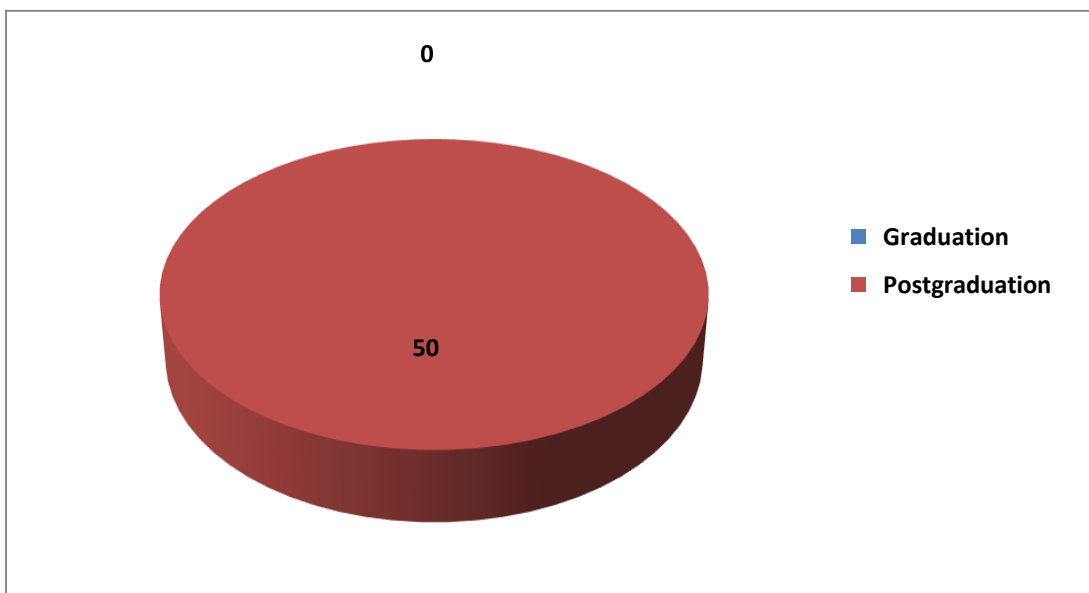
Position wise distribution of the teacher educators



From the figure 3.6 it can be majority of them (74%) were lecturers whereas 26% were senior lecturers.

Figure 3.7

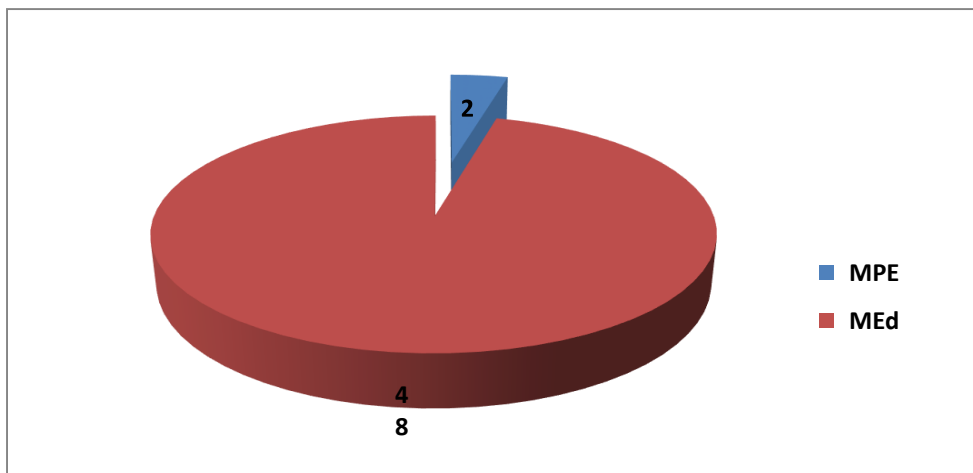
Education qualification wise distribution of the teacher educators



From the figure 3.7 it can be seen that all (100%) respondent teacher educators were having postgraduate qualifications.

Figure 3.8

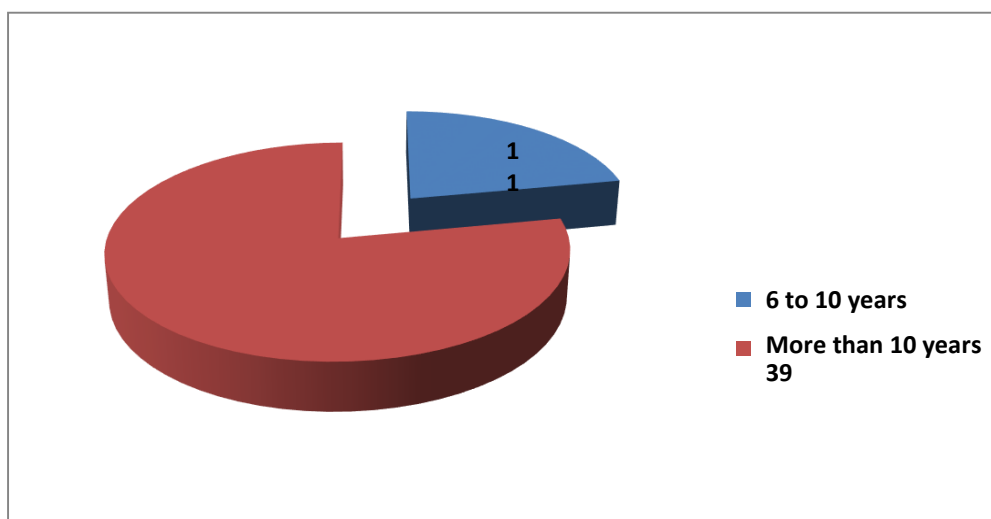
Professional qualification wise distribution of the teacher educators



From the figure 3.8 it can be observed that out of 50 (100%) respondent teacher educators, mostly (96%) of them were M.Ed. qualified whereas, 4% were MPE qualified. Out of the 48 (96%) M.Ed. qualified teacher educators, 11 (22%) of them were having Ph.D. qualification and 8(16%) were M.Phil. qualified teacher educators.

Figure 3.9

Teaching experience wise distribution of the Teacher educators



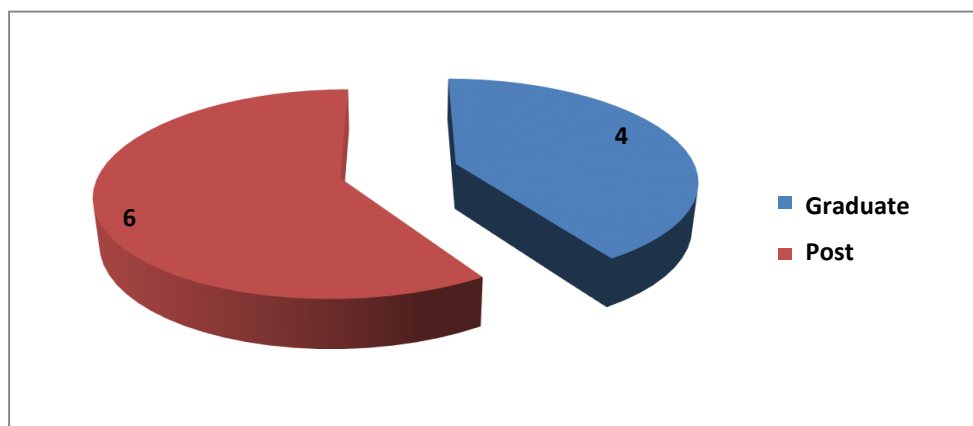
From the figure 3.9 it can be seen that out of 50 (100%) respondent teacher educators, majority (78%) of them were having more than 10 years of teaching experience whereas 22% of them were having between 6 to 10 years of teaching experience.

3.3.3 Demographic Profile of Resource Persons

Profile of 110 respondent resource persons has been presented in terms of their educational as well as professional qualifications and teaching experience in the following figures 3.10 to 3.12.

Figure 3.10

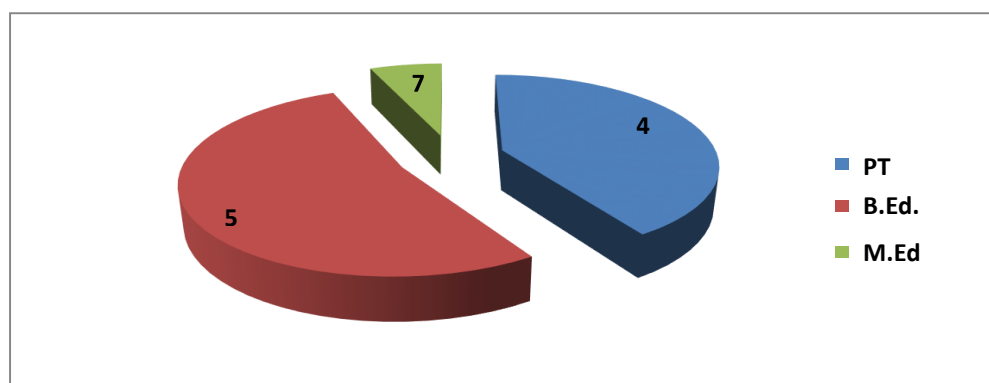
Education qualification wise distribution of the resource persons



From the figure 3.10 it can be observed that out of 110 (100%) respondent resource persons, 59% of them were having postgraduate qualification in Arts, Commerce and Science disciplines whereas, 41% were having graduate qualification.

Figure 3.11

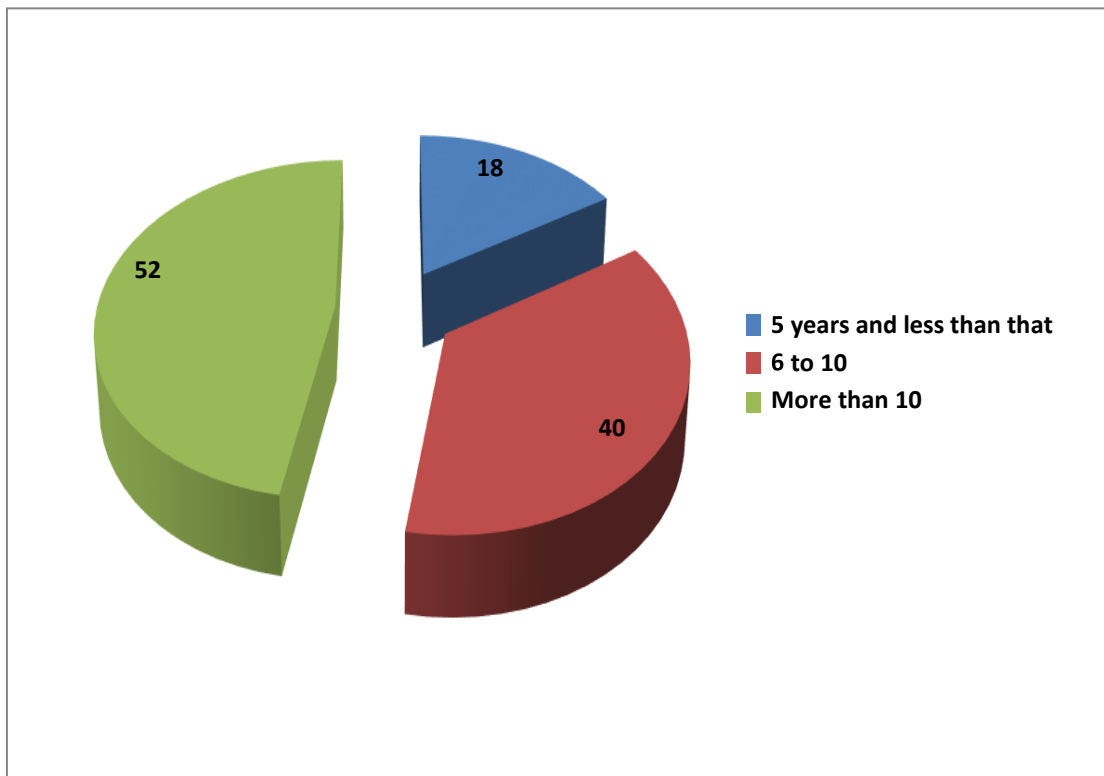
Professional qualification wise distribution of the resource persons



From the figure 3.11 it can be observed that out of 110 (100%) respondent resource persons, majority (53%) were B.Ed. qualified whereas, 41% were PTC qualified. The remaining 7 (6%) resource persons were M.Ed. qualified. 3 of the M.Ed. qualified resource persons were having Ph.D. qualification.

Figure 3.12

Teaching experience wise distribution of the Resource persons



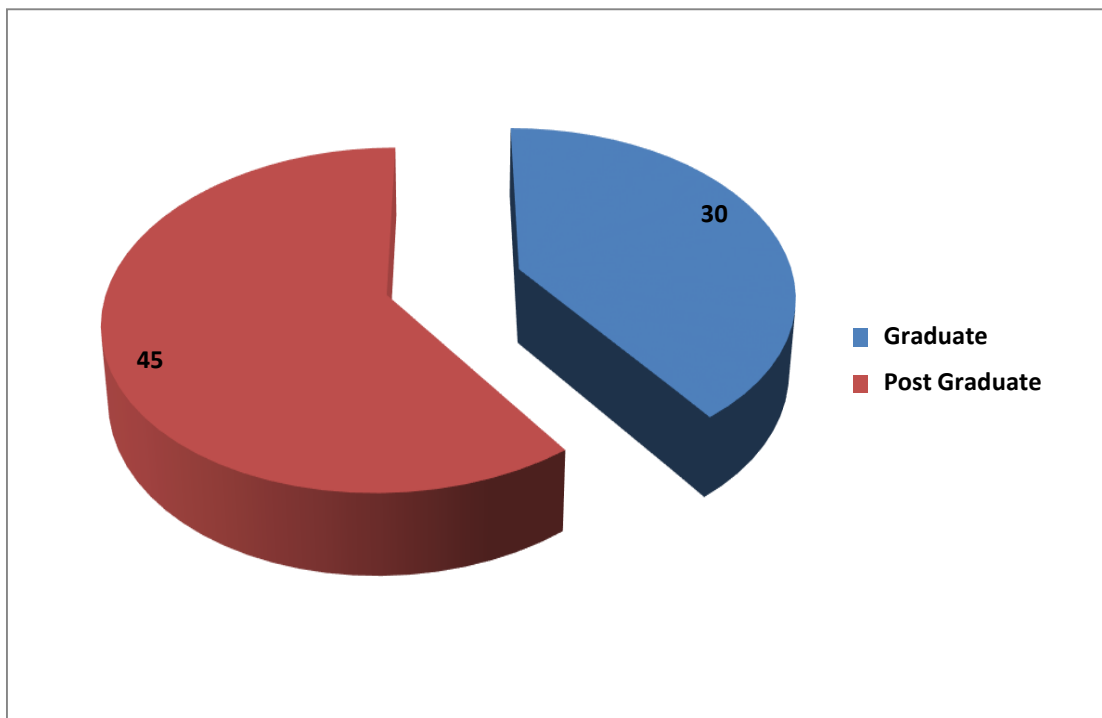
From the figure 3.12 it can be observed that out of 110 (100%) respondent resource persons, 47% were having more than 10 years of teaching experience whereas 36% of them were having between 6 to 10 years of teaching experience. The remaining 16% were having 5 years and less than that teaching experience.

3.3.4 Demographic Profile of Head Teachers

Profile of seventy-five respondents head teachers has been presented in terms of their educational as well as professional qualifications and teaching experience in the forms of following figures 3.13 to 3.15.

Figure 3.13

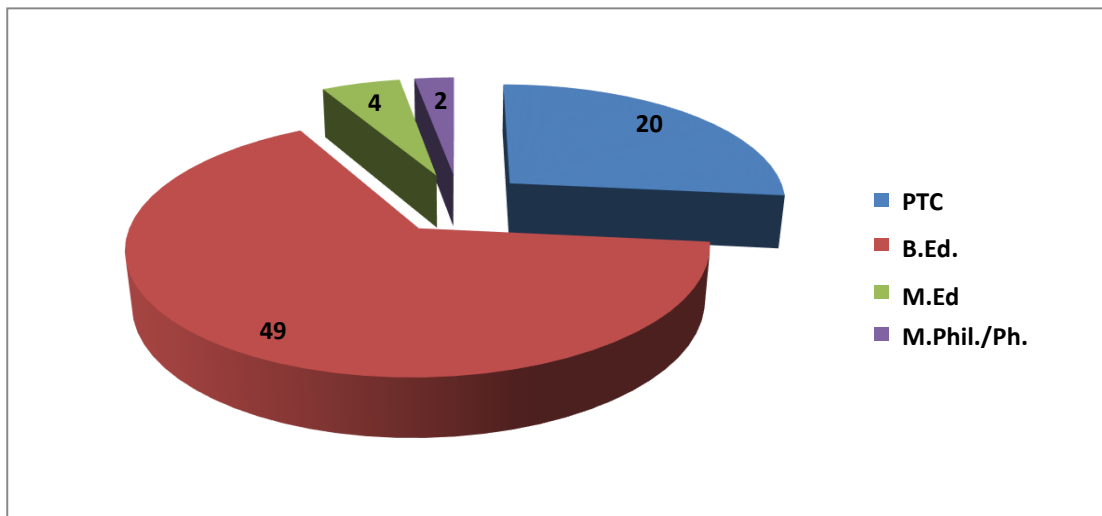
Education qualification wise distribution of the Head teachers



From the figure 3.13 it can be observed that out of 75 (100%) respondent head teachers, majority (60%) were having postgraduate qualification in Arts, Commerce and Science disciplines whereas, 40% were having graduate qualification.

Figure 3.14

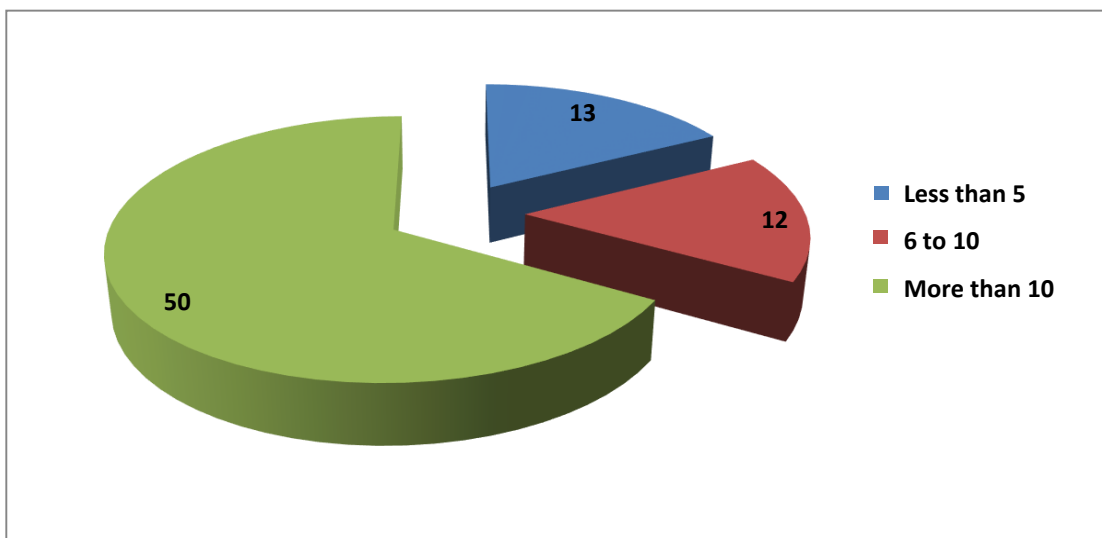
Professional qualification wise distribution of the Head teachers



From the figure 3.14 it can be observed that out of 75 (100%) respondent head teachers, majority (65%) were B.Ed. qualified whereas, 27% were PTC qualified. The remaining 6 head teachers were M.Ed. (5%) and Ph.D. (3%) qualified.

Figure 3.15

Teaching experience wise distribution of the Head teachers



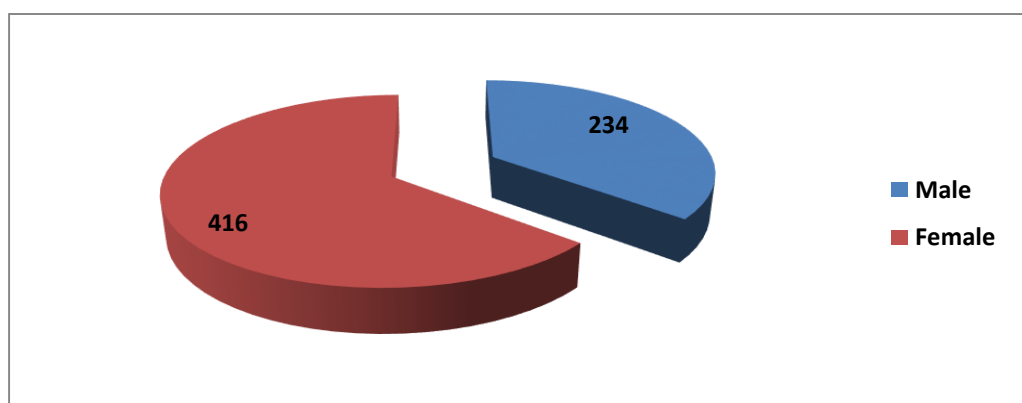
From the figure 3.15 it can be observed that out of 75 (100%) respondent head teachers, majority (67%) were having more than 10 years of teaching experience whereas remaining 25 teachers were having less than 5 years (17%) and between 6 to 10 years (16%) of teaching experience.

3.3.5 Demographic Profile of Primary School Teachers

Profile of 650 respondent primary school teachers has been presented in terms of their gender, area of school, educational qualification, professional qualifications, teaching experience and training programmes attended at district, block and cluster level. Their profile has been presented in the following figures 3.16 to 3.21.

Figure 3.16

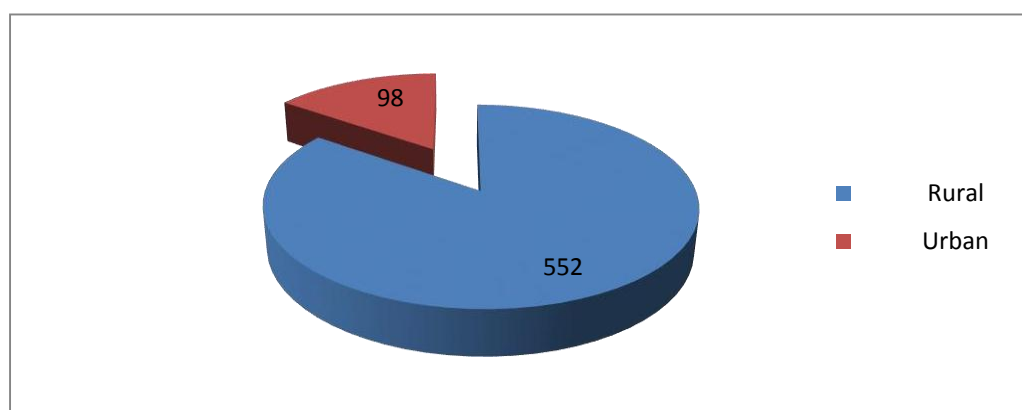
Gender wise distribution of the school teachers



From the figure 3.16 it can be observed that out of 650 (100%) respondent school teachers, 234 (36%) were male whereas 416 (64%) were female.

Figure 3.17

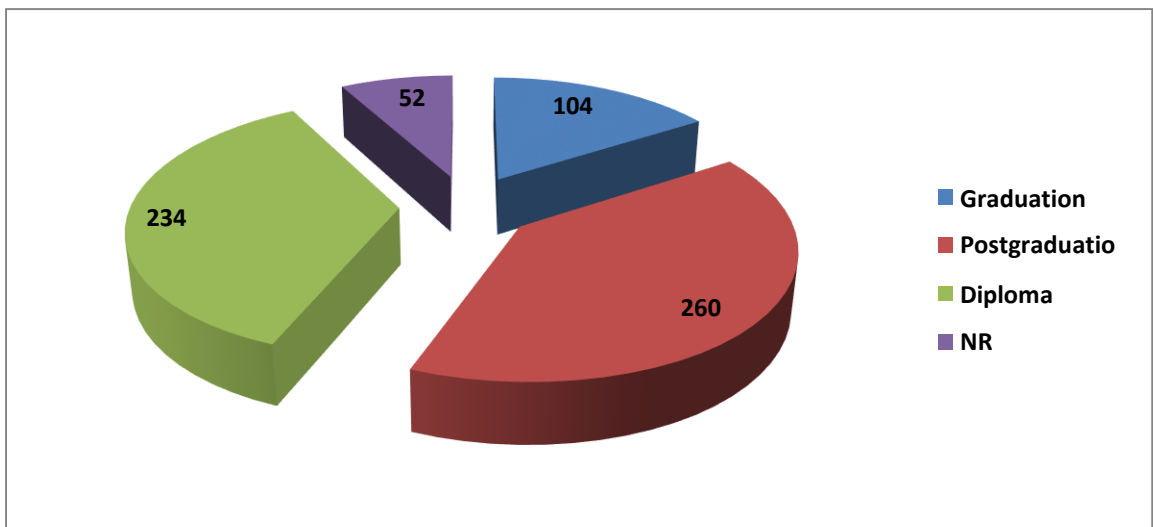
School area wise distribution of the school teachers



From the figure 3.17 it can be seen that out of 650 (100%) respondent school teachers, 98 (15%) were from urban area schools whereas 552 (85%) were from rural area schools.

Figure 3.18

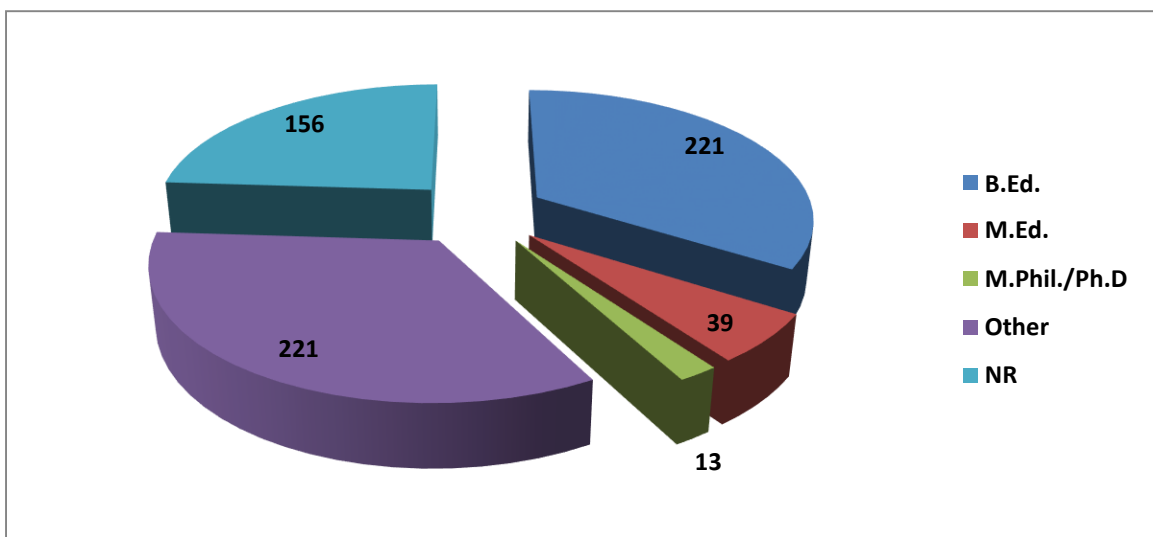
Education qualification wise distribution of the school teachers



From the figure 3.18 it can be observed that out of 650 (100%) respondent school teachers, 104 (16%) were graduate qualified and 260 (40%) were postgraduate qualified whereas, 234 (36%) teachers were diploma in Primary teacher certificate (PTC) qualified.

Figure 3.19

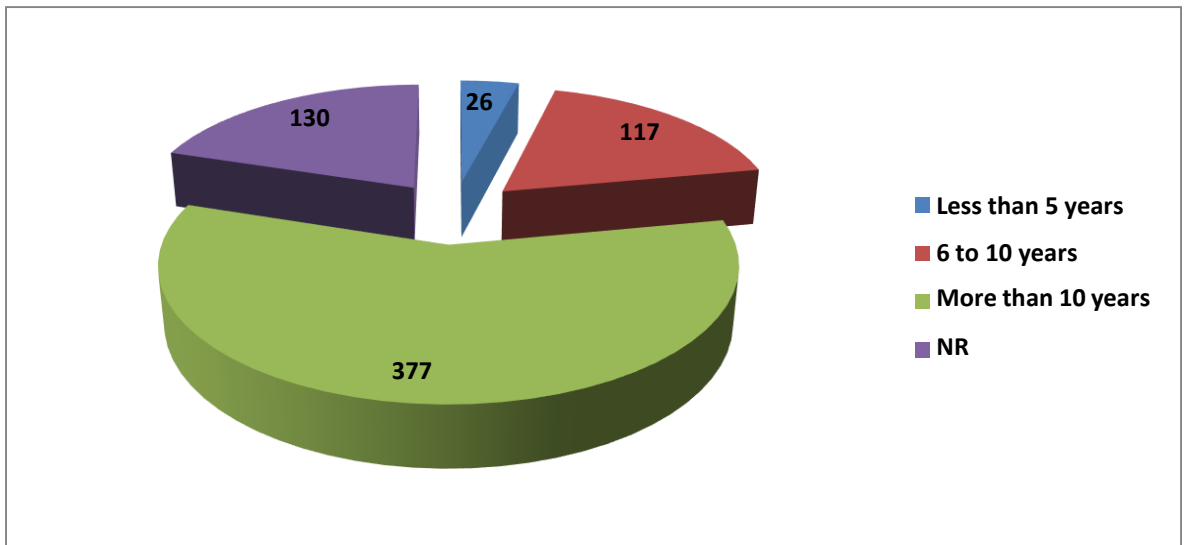
Professional qualification wise distribution of the school teachers



From the figure 3.19 it can be seen that out of 650 (100%) respondent school teachers, 221 (34%) were B.Ed. qualified and 39 (6%) were M.Ed. qualified. The remaining 13 (2%) teachers were M.Phil./Ph.D. qualified and 221 (34%) were other qualifications like PTC and diploma in elementary education.

Figure 3.20

Teaching experience wise distribution of the school teachers



From the figure 3.20 it can be observed that out of 650 (100%) respondent school teachers, 377 (58%) were having more than 10 years of teaching experience whereas 26 (4%) were having less than 5 years of teaching experience. The remaining 117 (18%) respondent teachers were having 6 to 10 years of teaching experience.

Table 3.1

Distribution of the school teachers in terms of training received

Sr.No	Training level	Number of training attended	Number of Teachers	
			Frequency	Percentage
1	District level	1 to 5 trainings	117	18
		6 to 10 trainings	39	6
		More than 10 trainings	26	4
		Many	130	20
		NR	91	14
2	Taluka level	1 to 5 trainings	26	4
		6 to 10 trainings	65	10
		More than 10 trainings	91	14
		Many	182	28
		NR	39	6
3	Cluster level	1 to 5 trainings	26	4
		6 to 10 trainings	52	8
		More than 10 trainings	117	18
		Many	143	22
		NR	65	10

From the table 3.1 it can be observed that out of 650 (100%) respondent school teachers, more than half of them had attended training programmes at Taluka level (56%) and Cluster level (52%) whereas, 48% of them had attended district level training programmes.

3.4 TOOLS OF THE STUDY

According to Uchat (2004), The instrument used to obtain data, considering the research objectives, during the research process, is called a research tool.

Tools and techniques of data collection must be selected keeping in mind the objectives of the Study and the data required for the same.

Considering the nature and objectives of the present Study, the researcher developed eight tools for the collection of data viz. Questionnaire for Teachers, Opinionnaire for Teachers, Questionnaire for Resource Persons, Questionnaire

for DIET Lecturers, Questionnaire for DIET Principals, Questionnaire for Head Teachers and Observation Schedule for In-service Teacher Training Programmes - each research tool was used for a different purpose.

The researcher used multiple ways of acquiring data in order to get a complete understanding of the area that was being researched i.e. the organization and implementation of the in-service training programs. Functionaries and beneficiaries were given questionnaires, Opinionnaires and observation too was done to collect the required details. There was both quantitative and qualitative data taken from the functionaries and beneficiaries. Survey studies conducted in the past too have used triangulation methods to collect data from different sources, via different methods to check consistency of data.

In the present Study, the researcher prepared five questionnaires, one opinionnaire and one observation schedule. The present Study gathered information regarding the on- going in-service teachers training programmes in terms of its objectives, its relevance to emerging educational trends, the content, modules, transactional modalities, modes of presentation and logistics. For the preparation of tools (questionnaire) for teachers, resource persons, researcher followed the steps mentioned by Mouly (1970) in his book “The Science of Educational research”.

3.5 PROCEDURE OF TOOL VALIDATION:

The following steps were taken to validate the tools -

1. Preparation of draft tool via discussion with the functionaries and beneficiaries - teachers, head teachers, resource persons, Principal, etc)
2. Validation of the tools by Experts from the field of teacher education, Experts in the field of teacher training, DIET faculties and experts associated with different teacher education institutions.
3. Modification of tools based on expert’s comments.
4. Preparation of final draft.
5. Tools translated into regional language in Gujarati.
6. Gujarati language expert’s suggestions incorporated in tool

7. Administration in the sample districts.

All the tools were constructed in English and then translated in Gujarati language as the medium of instruction is Gujarati in all the selected primary schools and DIETs.

In the present Study, the following tools were used for collecting the required data:

Sr. No	Objectives	Tools used
1.	To study the different components of the ongoing in-service training programmes conducted by DIETs of Gujarat.	- Observation schedule of in-service training programs. - Questionnaire for teachers
2.	To identify the problems faced by DIET Lecturers / Teacher Educators in organizing in-service training programmes.	- Questionnaire for teacher educators (DIET Lecturers).
3.	Questionnaire for teacher educators (DIET Lecturers).	- Questionnaire for resource persons Official documents / records
4.	To study the views and reactions of the functionaries and beneficiaries of in-service training programmes in terms of: - training needs, - training materials and modules, - transactional modalities and - planning & implementation	- Questionnaire for DIET Principals - Questionnaire for DIET Lecturers - Questionnaire for Resource Persons - Questionnaire for Head teachers - Opinionnaires for teachers - Questionnaire for Teachers

3.5.1 Questionnaire for Teachers.

To prepare questionnaire for teachers, the researcher followed seven different steps as recommended by (Patel, 2007).

In the **first step**, of preparing questionnaire, the researcher studied DIET Guidelines & Annual Work Plan, research studies, some other reference books and related articles to have an in-depth knowledge about the concerned area. While going through the review of related literature, the researcher found that Bardoloi (1990), DIET (1992), Suthar (1992), Mehta (1999), Sathyanesan (2001), Ramachandran (2002), Rao (2003), Raina (2005), Kumar (2005), Malik and Bhardwaj (2013) and Iqbal (2016) had used questionnaire as a tool for collecting data from the teachers regarding various in-service training programmes. The researcher used these tools as reference in the process of design of the tools for this Study.

In the **second step**, of item development, the researcher discussed with DIET faculties regarding in-service training programmes. Here the researcher personally met DIET personnel and discussed with them about the in-service training programmes and collected relevant written material. Then the researcher met the experienced teachers, head teachers and resource persons, who had a rich experience of working as an expert in various training programmes organized by DIET.

The researcher discussed some important topics with them regarding objectives of in-service training programmes, content of training programmes, training material and module, transactional modalities, planning and implementation and use of information communication technology selection procedure of resource persons, teaching methods, utility of in-service training programmes, problems of in-service training programmes, resource support, monitoring, expectations of in-service training programmes and logistics etc.

In the **third step**, the researcher obtained the suggestions of lecturers, teachers, head teachers and resource person on questionnaire related items prepared in the second step.

In the **fourth step**, the researcher followed the suggestions of lecturers, teachers, headteachers and resource persons on questionnaire related items and deleted some of the items from the questionnaire. Wherever needed, the researcher divided some items into two separate items. Then the second draft was prepared by making necessary modification. A copy of the questionnaire was then shown to the guide. After discussing with the guide, some questions were deleted and some questions were separated into two different questions. After that, the second draft was prepared.

In the **fifth step**, of validation of tools, the second draft of questionnaire was sent to the university professors, experts organizing various in-service training programmes, headteachers, teachers, lecturers cum conveners organizing in-service training programmes, language experts as well as research scholars and their opinions were obtained. Then the third draft was prepared.

In the **sixth step**, the opinions and suggestions of the experts were collected regarding various items included in the questionnaire. The list of experts given in (**Appendix –II**). The major suggestions given by Experts were to change the sequence of questions, items should be simple and short, tool should be translated into Gujarati and open-ended questions should be placed at the end of the questionnaire.

In the **seventh step**, the researcher prepared the final draft of the questionnaire taking into account the suggestions of the experts. The questionnaire was then finalized based on discussions with the guide and suggestions obtained from the experts.

In the final stage, the tool was translated into regional language i.e. Gujarati after validating the same with Gujarati language expert.

Finally, 15 close ended questions and 1 open ended questions leading to total 16 questions were included in the final draft of questionnaire in (**Appendix - II**). Details regarding various dimensions of questionnaire for teachers are given in the following table 3.2.

Table 3.2**Dimensions of Questionnaire for Teachers**

Sr. No.	Dimensions	TotalItems	Types of Questions	
			Close ended	Open ended
1.	Transactional Techniques/methods	5	5	-
2.	Usefulness of in-service training program	3	3	-
3.	Quality of resource persons	1	1	-
4.	Related to training duration	1	1	-
5.	Related to training contents	1	1	-
6.	Resource support to school	1	1	-
7.	Monitoring and sharing	1	1	-
8.	Implementation of training	1	1	
9.	Strength and weakness	1	-	1
10.	Logistics	1	1	-
	Total	16	15	1

Table 3.2 shows that the final draft of questionnaire for administration had ten dimensions including fifteen close ended items and one open ended items leading to total sixteen items.

3.5.2 Opinionnaire for Teachers.

To prepare opinionnaire for teachers, the researcher followed seven different steps as recommended by (Patel, 2007).

In the **first step**, of preparing opinionnaire, the researcher studied DIET Guideline & Annual Work Plan, research studies, some other reference books and related articles to have an in-depth knowledge about the concerned area. While going through the review of related literature, the researcher found that Raina (2005), Lobo (1996), Patel (2007) and Mehta (1999) had used opinionnaire as a tool for collecting data from teachers as well as different personnel working in the field of school education. The researcher used these tools as reference in the process of design of the tools for this Study.

In the **second step**, of item development, the researcher discussed with DIET faculties regarding in-service training programmes. Here the researcher personally met DIET personnel and discussed with them about the in-service training programmes and collected relevant written material. Then the researcher met the experienced teachers, head teachers and resource persons, who had a rich experience of working as an expert in various training programmes organized by DIET.

The researcher discussed some important topics with them regarding objectives of in- service training programmes, content of training programmes, training material and module, transactional modalities, planning and implementation and use of information communication technology, utility of in-service training programmes, problems of in- service training programmes, resource persons and convener and logistics etc.

In the **third step**, the researcher obtained the suggestions of teachers, head teachers, resource persons and lecturers on opinionnaire related various items prepared in the second step.

In the **fourth step**, the researcher followed the suggestions of teachers, head teachers, resource persons and lecturers on opinionnaire related various items and separated item no. 25 into two different statements. The researcher also deleted some of the items from the opinionnaire. Then the second draft was prepared by making necessary modification. Then the copy of the opinionnaire was shown to the guide. After discussing with the guide, some statements were deleted and some statements were separated into two different statements. After that, the second draft of opinionnaire was prepared.

In the **fifth step**, of validation of tools, the second draft of opinionnaire was sent to the university professors, experts organizing various in-service training, head teachers, teachers, lecturers organizing in-service training, language experts as well as research scholars and their opinions were obtained. Then the third draft of opinionnaire was prepared.

In the **sixth step**, the opinions and suggestions of the experts were collected regarding various items included in the opinionnaire.

The major suggestions given by the Experts were to correct the language of the statements and ensure the proper meaning was being conveyed; few negative statements should be included in the opinionnaire; the sequence of few statements were to be changed.

In the **seventh step**, the researcher prepared the final draft of the opinionnaire taking into account the suggestions of the experts. The opinionnaire was then finalized based on discussions with the guide and suggestions obtained from the experts.

In the final stage, the tool was translated into regional language i.e. Gujarati after validating the same with Gujarati language expert.

Finally, 26 statements were included in the final draft of opinionnaire (**Appendix - II**). Details regarding various dimensions of opinionnaire for teachers are given in the following table 3.3.

Table 3.3
Dimensions of Opinionnaire for Teachers

Sr. No.	Dimensions	Total Statements
1	Comments on in-service training programme	5
2	Transactional techniques	4
3	Usefulness of in-service training programme	4
4	Evaluation of in-service training programme	2
5	Training material and module	2
6	Regarding resource persons / convener	3
7	Physical facilities	3
8	Problems faced by teachers	3
	Total	26

Table 3.3 shows that the final draft of opinionnaire for teachers had eight dimensions including twenty-six statements. The responses (opinions) of the teachers towards the various statements of opinionnaire were obtained on three point scales i.e. Always, Occasionally and Never.

3.5.3 Questionnaire for Resource Persons

To prepare questionnaire for resource persons, the researcher followed seven different steps as recommended by (Patel, 2007).

In the **first step**, of preparing questionnaire, the researcher studied DIET Guideline & Annual Work Plan, research studies, some other reference books and related articles to have an in-depth knowledge about the concerned area. While going through the review of related literature, the researcher found that Mehta (1999) had used questionnaire for collecting data from the resource persons regarding the in-service training programmes whereas Bardoloi (1990), DIET (1992), Suthar (1992), Sathyanesan (2001),

Ramachandran (2002), Rao (2003), Raina (2005), Kumar (2005), Patel (2007), Malik and Bhardwaj (2013) and Iqbal (2016) had used questionnaire for collecting data from the teachers regarding the in-service training programmes. The researcher used these tools as reference in the process of design of the tools for this Study.

In the **second step**, of item development, the researcher discussed with DIET faculties regarding in-service training programmes. Here the researcher personally met DIET personnel and discussed with them about the in-service training programmes and collected relevant written material. Then the researcher met the experienced teachers, head teachers and resource persons, who had a rich experience of working as an expert in various training programmes organized by DIET.

The researcher discussed some important topics with them regarding objectives of in-service training programmes, content of training programmes, training needs, training material and module, transactional modalities and selection procedure of resource persons etc.

In the **third step**, the researcher obtained the suggestions of lecturers, teachers, head teachers and resource person on questionnaire related to various items prepared in the second step.

In the **fourth step**, the researcher followed the suggestions of lecturers, teachers, headteachers and resource persons on questionnaire related to various items and deleted some of the items from the questionnaire. Wherever needed, the researcher divided some items into two separate items. Then the second draft was prepared by making necessary modification. A copy of the questionnaire was then shown to the /guide and appropriate modifications were made; following this, the second draft was prepared.

In the **fifth step**, of validation of tools, the second draft of questionnaire was sent to the university professors, experts organizing various in-service training programmes, headteachers, teachers, lecturers cum conveners organizing in-service training programmes, language experts as well as research scholars and their opinions were obtained. Then the third draft was prepared.

In the **sixth step**, the opinions and suggestions of the experts were collected regarding various items included in the questionnaire.

The major suggestions given by the Experts were to add few more relevant questions; as well as to sequence the items in particular order.

In the **seventh step**, the researcher prepared the final draft of the questionnaire taking into account the suggestions of the experts. The questionnaire was then finalized based on discussions with the guide and suggestions obtained from the experts.

In the final stage, after validating the tool with Gujarati language expert, it was translated into regional language i.e. Gujarati

Finally, 18 close ended questions and 3 open ended questions leading to total 21 questions were included in the final draft of questionnaire in (**Appendix - II**). Details regarding various dimensions of questionnaire for resource persons are given in the following table 3.4.

Table 3.4**Dimensions of Questionnaire for Resource Persons**

Sr. No.	Dimensions	TotalItems	Types of Questions	
			Close ended	Open Ended
1.	Component of in-service training	6	5	1
2.	Training modules and material	4	4	-
3.	Honorarium related aspect	1	1	-
4.	Selection procedure of resource persons	3	3	
5.	Usefulness of training	1	-	1
6.	Issues and challenges	1	-	1
7.	Cooperation related aspect	3	3	-
8.	Training duration	2	2	-
	Total	21	18	3

Table 3.4 shows that the final draft of questionnaire for administration had eight dimensions including eighteen close ended items and three open ended items leading to total twenty-one items.

3.5.4 Questionnaire for DIET Lecturers

This questionnaire aimed at studying perceptions of the DIET Lecturers i.e. Training Coordinators / Convener about the various aspects of training programme conducted by DIET. To prepare questionnaire for DIET Lecturers, the researcher followed seven different steps as recommended by (Patel, 2007).

To begin with, the researcher studied DIET Guideline & Annual Work Plan, research studies, some other reference books and related articles to have an in-depth knowledge about the concerned area. While going through the review of related literature, the researcher found that Bardoloi (1990), NIEPA (1992), Govinda (1996), Mehta (1999) and Swaminathan et al. (2002) had used questionnaire for collecting data from the teacher educators. The researcher referred to these tools in the process of design of the tools for this Study.

In the **second step**, of item development, the researcher discussed with DIET faculties regarding in-service training programmes. Here the researcher personally met DIET personnel and discussed with them about the in-service training programmes and collected relevant written material.

In the **third step**, the researcher obtained the suggestions of DIET Lecturers on questionnaire related various items prepared in the second step.

In the **fourth step**, the researcher followed the suggestions of DIET Lecturers on questionnaire related various items. Wherever needed, the researcher made the necessary changes; a copy of the questionnaire was then shown to the guide for corrections. After that, the second draft was prepared.

In the **fifth step**, of validation of tools, the second draft of questionnaire was sent to the university professors, experts organizing various in-service training programmes, lecturers cum conveners organizing in-service training programmes, language experts as well as research scholars and their opinions were obtained. Then the third draft was prepared.

In the **sixth step**, the opinions and suggestions of the experts were collected regarding various items included in the questionnaire.

The major suggestions given by the Experts were to check the appropriateness of language; to give clear instructions to the respondents; to add few more relevant questions; to include respondents having age above 50, and to add one more open-ended item.

In the **seventh step**, the researcher prepared the final draft of the questionnaire taking into account the suggestions of the experts. Based on the suggestions obtained from experts and the Guide, the questionnaire was finalized. In the final stage, the tool was translated into regional language after validating the same with Gujarati language expert.

Finally, 24 close ended questions and 7 open ended questions leading to total 31 questions were included in the final draft of questionnaire (Appendix - II). Details regarding various dimensions of questionnaire for DIET Lecturers are given in the following table 3.5.

Table 3.5**Dimensions of Questionnaire for DIET Lecturers**

Sr. No.	Dimensions	Total Items	Types of Questions	
			Close ended	Open Ended
1.	Components of in-service training programmes	8	6	2
2.	Usefulness of training programme	2	2	-
3.	Identification of training needs	2	1	1
4.	Training Contents	2	2	-
5.	Training material and modules	4	4	-
6.	Execution of training programmes (Resource Persons)	4	4	-
7.	Use of ICT in training programme	2	2	-
8.	Evaluation & follow-up	2	2	-
9.	Training impact	1	-	1
10.	Issues and challenges	2	1	1
11.	Strength of training programmes	2	-	2
	Total	31	24	7

Table 3.5 shows that the final draft of questionnaire for administration had eleven dimensions including twenty-four close ended items and seven open ended items leading to total thirty-one items.

3.5.5 Questionnaire for DIET Principals

Questionnaire was meant for seeking information from the Principal of DIETs, on the planning and implementation of in-service training programmes for primary and upperprimary school teachers under GCERT / DIETs. To prepare questionnaire for DIET Lecturers, the researcher followed seven different steps as recommended by (Patel, 2007).

In the **first step**, of preparing questionnaire, the DIET Guidelines, Annual Work Plan, research studies, related reference books and articles were referred to have an in-depth knowledge about the concerned area. While going through the review of related literature, the researcher did not find any study having related data from DIET Principal regarding various aspects of In-service Training conducted by DIET or any other aspects connected with DIET. So the researcher referred all the studies conducted for Teacher Educators of DIET and Primary Teachers.

Throughout the review, the researcher found that Bardoloi (1990) and Mehta (1999) had used questionnaire for collecting data from the teacher educators as well as teachers; NIEPA (1992), Govinda (1996) and Swaminathan et al. (2002) had used questionnaire for collecting data from the teacher educators only whereas DIET (1992), Suthar (1992), Sathyanesan (2001), Ramachandran (2002), Rao (2003), Raina (2005), Kumar (2005), Malik and Bhardwaj (2013) and Iqbal (2016) had used questionnaire for collecting data from the teachers regarding in-service training programmes. The researcher used these tools as reference in the process of design of the tools for this Study.

In the **second step**, of item development, the researcher discussed with DIET Principals regarding various aspects of In-service Training Programmes conducted by DIET as well as other aspects connected with DIET and collected relevant written material.

In the **third step**, the researcher obtained the suggestions of DIET Principals on questionnaire related to various items prepared in the second step.

In the **fourth step**, the researcher followed the suggestions of DIET Principals on questionnaire related various items. The second draft was prepared by making necessary modifications. A copy of the questionnaire was then shown to the guide. After discussing with the guide, the suggested changes were made and the second draft was prepared.

In the **fifth step**, of validation of tools, the second draft of questionnaire was sent to the university professors, experts organizing various in-service training programmes, lecturers cum conveners organizing in-service training programmes, language experts as well as research scholars and their opinions were obtained. Then the third draft was prepared.

In the **sixth step**, the opinions and suggestions of the experts were collected regarding various items included in the questionnaire.

The major suggestions given by the Experts included increasing the number of questions in the questionnaire and adding few open ended items.

In the **seventh step**, the researcher prepared the final draft of the questionnaire - the questionnaire was then finalized based on discussions with the guide and suggestions obtained from the experts.

In the final stage, the tool was translated into regional language after validating the same with Gujarati language expert.

Finally, 12 close ended questions and 2 open ended questions leading to total 14 questions were included in the final draft of questionnaire in (**Appendix -II**). Details regarding various dimensions of questionnaire for DIET Lecturers are given in the following table 3.6.

Table 3.6**Dimensions of Questionnaire for DIET Principals**

Sr. No.	Dimensions	Total Items	Types of Questions	
			Close ended	Open ended
1.	Benefit of training	1	1	-
2.	Capacity of training programme	1	1	-
3.	Administrative freedom	2	2	-
4.	Coordination with other Departments	1	1	-
5.	Discussion with teachers	2	2	-
6.	Difficulty in fund flow	1	1	-
7.	Motivation & Guidance to Lecturers	2	2	-
8.	Monitoring of training	1	1	-
9.	Impact of training	2	1	1
10.	Strength & weakness of DIET	1	-	1
	Total	14	12	2

Table 3.6 shows that the final draft of questionnaire for administration had ten dimensions including twelve close ended items and two open ended items leading to total fourteen items.

3.5.6 Questionnaire for Head Teachers

Questionnaire was meant for seeking information from the Head Teachers of the primary and upper primary schools. To prepare questionnaire for head teachers, the researcher followed seven different steps as recommended by (Patel, 2007).

In the **first step**, of preparing questionnaire, the researcher studied DIET Guideline, research studies, some other reference books and related articles to have an in-depth knowledge about the concerned area. While going through the review of related literature, the researcher found that Sathyanesan (2001), Kumar, V. (2005), Sharma (2006) and Yadav et al. (2016) had used questionnaire for collecting data from the headteacher whereas DIET (1992),

Suthar (1992), Ramachandran (2002), Rao (2003), Raina (2005), Malik and Bhardwaj (2013) and Iqbal (2016) had used questionnaire for collecting data from the teachers regarding in-service training programmes. The researcher used these tools as reference in the process of design of the tools for this Study.

In the **second step**, of item development, the researcher discussed with DIET faculties regarding in-service training programmes and collected relevant written material. Then the researcher met the experienced teachers, head teachers and resource persons, who had a rich experience of working as an expert in various training programmes organized by DIET.

In the **third step**, the researcher obtained the suggestions of lecturers, teachers, head teachers and resource person on questionnaire related to various items prepared in the second step.

In the **fourth step**, the researcher followed the suggestions of lecturers, teachers, headteachers and resource persons on questionnaire related to various items and deleted some of the items from the questionnaire. Then the second draft was prepared by making necessary modifications. A copy of the questionnaire was then shown to the guide for suggestions - the second draft was prepared after incorporating the suggested changes.

In the **fifth step**, of validation of tools, the second draft of questionnaire was sent to the university professors, experts organizing various in-service training programmes, headteachers, teachers, lecturers cum conveners organizing in-service training programmes, language experts as well as research scholars and their opinions were obtained. Then the third draft was prepared.

In the **sixth step**, the suggestions of the experts, were included in the questionnaire namely correction in language; sequencing of items; adding few more relevant items. In the **seventh step**, the researcher prepared the final draft of the questionnaire taking into account the suggestions of the experts. The questionnaire was then finalized based on discussions with the guide and suggestions obtained from the experts.

In the final stage, the tool was translated into regional language i.e. Gujarati after validating the same with Gujarati language expert.

Finally, 16 close ended questions and 01 open ended questions leading to total 20 questions were included in the final draft of questionnaire (**Appendix - II**). Details regarding various dimensions of questionnaire for teachers are in the following table 3.7

Table 3.7

Dimensions of Questionnaire for Head Teachers

Sr. No.	Dimensions	Total Items	Types of Questions	
			Close ended	Open Ended
1.	Benefit of training	1	1	-
2.	Innovative practices	1	1	-
3.	Comments on training	4	4	-
4.	Implementation of training in classroom	4	4	-
5.	School administration and management	3	3	-
6.	Availability of training modules and material	2	2	-
7.	Discussion with teachers about training	2	1	1
	Total	17	16	1

Table 3.7 shows that the final draft of questionnaire for administration had seven dimensions including sixteen close ended items and one open ended items leading to total seventeen items.

3.5.7 Observation Schedule for In-service Teacher Training Programmes

Observation schedule was meant for seeking information regarding techniques and methods used in the in-service training programmes, usefulness of the available facilities and the level of activities conducted in the concerned in-service training programmes.

The researcher/observer, observed total 25 in-service training programmes from the six selected districts. Researcher identified different themes /areas which were relevant for the Study - for example the areas of training in pedagogy of language, Mathematics, Science and Social Science teaching, Action Research, training on School leadership, Health and wellbeing, training on PRAGNYA

approach, school readiness programme, new trends in education, language teaching, training on transaction strategies, training on evaluation and learning outcomes, training on school initiative (in terms of Padhe Bharat Badhe Bharat, KGBV, role of SMC, PGI, Shagun portal, activity based learning etc), Head teacher's leadership training, etc.

For observation of in-service training programmes, list of ongoing in-service training programmes was taken from DIETs and out of them five relevant in-service training programmes were selected from each of the six DIETs randomly. 5 programmes could not be observed due to non-availability of DIET lecturers and other factors. So total 25 (twenty-five) in-service training programmes were observed.

The researcher selected 25 in-service training programmes which specifically addressed these areas and observed the methods and techniques used in these in-service training programmes, the facilities available and the logistics and activities conducted during these programmes by the DIETs of Gujarat, during the academic years 2018- 2019 and 2019-2020.

Training given to Observers for observation of the Training Programs.

The data related to various components of in-service teacher training programmes organized at DIET were collected by the means of observation schedule.

At Vadodara training centers, the researcher himself observed the ongoing activities in the in-service training programmes; To collect data from the South zone (Surat), North zone (Idar), Central zone (Vadodara) Saurashtra zone (Amreli and Rajkot) and Kutch Region (Bhuj), the researcher took the help of DIET Lecturers of the concerned districts.

These DIET Lecturers had many years of experience in the elementary education system and thus their experience and qualifications were suited to the task i.e. observation. The educational qualification of the observers ranged from graduation (B.Sc./B.A.) to post-graduation (M.Sc.). Majority of the observers were having PTC, B.Ed. and M.Ed. as their professional qualifications while two of the observers had PhD qualification.

The lecturers of the concerned DIETs were made familiar with the objectives of the present Study and the nature of data required for the present Study.

With different observers, there is possibility of variation in terms of what is observed especially if there is subjective data. However, since the data pertaining to the Observation of different components of the Training Programs was objective type data there was less probability of observer bias.

The Observers were explained the importance of the required data and instructed about the manner in which the data was required to be collected. Discussions were held with all the Observers to ensure that all of them adhered to the objectives of the Study and measured using the same criteria.

The Observation schedule developed was a checklist to observe the teaching methods being used in the training programs. Also noted were the facilities available and the activities at the different training centers.

To prepare observation schedule for DIET's in-service teacher training programmes, the researcher followed seven different steps.

In the **first step**, of preparing observation schedule for DIET's in-service teacher training programme, the researcher studied related research studies, some other reference books and related articles to have an in-depth knowledge about the concerned area i.e. observation schedule for training programme. While going through the review of related literature, the researcher found that Bardoloi (1990), Mehta (1998), Franks (2000), Sathyanesan (2001), Soni (2011) and Iqbal (2016) had used observation schedule for collecting data related to in-service training programme. The researcher used these tools as reference in the process of design of the tools for this Study.

In the **second step**, of item development, the researcher discussed with DIET faculties regarding various aspects to be taken care of while observing an in-service training programme and collected relevant written material. Then the researcher met Cluster Resource Centre Coordinators (CRCs), Block Resource Centre Coordinators (BRCs), Resource Persons (RPs) and some selected School Inspectors who had a vast experience of working as an expert in various training programmes organized by DIET and got the ideas regarding what to observe while observing a training programme.

In the **third step**, the researcher obtained the suggestions of Lecturers, BRCs, CRCs, Resource Persons and School Inspectors on observation schedule related various items prepared in the second step.

In the **fourth step**, the researcher determined the duration of each observation period and number of periods to be observed. The researcher decided to observe ongoing process of in-service training programmes of DIETs. The researcher also decided to observe only 4/5 in-service training programmes of each of the six DIETs i.e. Rajkot, Amreli, Sabarkantha (Idar), Vadodara, Surat and Bhuj leading to total 25 in-service training programmes.

Then the second draft was prepared by making necessary modification. A copy of the observation schedule was then shown to the supervisor / guide. After discussing with the guide, some items from the observation schedule were deleted whereas some items were separated. After that, the second draft of observation schedule was prepared.

In the **fifth step**, of validation of observation schedule, the second draft of observation schedule was sent to four concerned experts (Expert no. 5, 6, 8 and 9) for the validation of observation schedule and their feedbacks were obtained. Then the third draft of observation schedule was prepared.

In the **sixth step**, the feedbacks and suggestions of the experts were collected regarding various items included in the observation schedule.

The major suggestions given by the Experts were to write the details in the form of statements and not questions and to make use of simple and clear terms to avoid any confusion.

In the **seventh step**, the researcher prepared the final draft of the observation schedule taking into account the suggestions of the experts. The observation schedule was then finalized based on discussions with the guide and suggestions obtained from the experts.

The final draft of the observation schedule had total twelve points wherein point no. 1 to 9 dealt with general information about the training programme i.e. name of DIET, name of faculty, subject of training, number of male and female teachers, number of male and female experts, date and place of training programme, name, designation and educational qualification of expert and the

points of discussion in the training. Point no.10 dealt with methods used in the in-service training programme along with their objectives i.e. to acquire knowledge, to develop skills.

Point no. 11 dealt with facilities available for in-service training programme along with their levels of use in terms of frequency of usage i.e. satisfactory, average and dissatisfactory and point no. 12 dealt with activities carried out in the in-service training programme and their level i.e. satisfactory, average and dissatisfactory.

In the final stage, the tool was translated into regional language i.e. Gujarati after validating the same with Gujarati language expert.

(Appendix - II).

3.6 SOURCE OF DATA

Each tool is particularly appropriate for certain sources of data. In order to collect the requisite data for the present research, the researcher had administered various tools i.e. Questionnaire for Teachers, Opinionnaire for Teachers, Questionnaire for Resource Persons, Questionnaire for DIET Lecturers, Questionnaire for DIET Principals, Questionnaire for Head Teachers and Observation Schedule for In-service Teacher Training Programmes. Each research tool was used to collect data of diverse nature.

The questionnaire for teachers was administered to collect data related to teachers' training experience, quality of modules and material used in the training programme, transactional modalities, usefulness of in-service training programmes, quality of resource persons, duration of training programme, training contents, training facilities, resource support to school, monitoring and sharing, implementation of training, strengths and weaknesses of training programme and logistics.

The opinionnaire for teachers was administered to collect data related to comments of teachers on in-service training programme, transactional techniques adopted in the in-service training programme, usefulness of in-service training programme, evaluation of in-service training programme, training material and module used in the in-service training programme, the

role and behavior of resource persons / convener of in-service training programme, physical facilities available in the in-service training programmes and the problems faced by teachers.

The questionnaire for resource person was administered to collect data related to various component of in-service training programme, training modules and material, honorarium related satisfaction, selection procedure of resource persons, usefulness of training programme, issues and challenges encountered by resource persons in the training programme, cooperation by teachers as well as programme convener and duration of the training programme.

The questionnaire for DIET Lecturer was administered to collect data related to various components of in-service teacher training programmes, usefulness of training programme, identification of training needs, training material and modules, training contents, execution of in-service teacher training programmes, use of ICT in in-service teacher training programmes, evaluation & follow-up process of in-service teacher training programmes, training impact, issues and challenges of in-service teacher training programmes as well as strength and weaknesses of teacher training programmes.

The questionnaire for DIET Principal was administered to collect data related to benefit of in-service teacher training programmes, administrative freedom in conducting in-service teacher training programmes, coordination with other departments, discussion with teachers, difficulty in fund, motivation and guidance imparted to lecturers by DIET Principal, monitoring of training, impact of training and strength and weakness of DIET.

The questionnaire for Head Teachers was administered to collect data related to benefits of in-service teacher training programmes, innovative practices adopted in in-service teacher training programmes, training management related problems, comments on training programme, implementation of training in classroom process, school administration and management, availability of training modules and material and discussion with teachers about training acquired by them.

The Observation Schedule for In-service Teacher Training Program was administered to collect data related to method and techniques adopted in the in-service teacher training programmes, facilities available in the in-service teacher training programmes and the level of utilizing these facilities, activities carried out during in-service teacher training programmes and the level of activities carried out during in-service teacher training programmes.

3.7 DATA COLLECTION

Data collection process for the present study consisted of two different strategies. To collect data from the Central zone i.e. Vadodara, the researcher personally remained present in the number of in-service teacher training programmes conducted at DIET for teachers and head teachers. The researcher personally collected data from the Teachers by the means of questionnaire and opinionnaire and from the Resource Persons, DIET Lecturers, DIET Principals and Head Teachers by the means of questionnaire.

3.8 DATA ANALYSIS

Data collected with the help of different tools were analyzed by applying varied methods. The data collected from the teachers, head teachers, resource persons, DIET lecturers, DIET principals by the means of questionnaire were computed with the help of frequencies and percentages. Some of the qualitative data of questionnaire were also analyzed through content analysis techniques. The data collected by the means of opinionnaire were computed with the help of frequencies, percentages and Intensity Index. The data collected by the means of observation schedule were analyzed through frequency and percentage analysis.

3.9 ETHICAL PROTOCOLS.

The researcher has taken necessary permission from concerned participants.

The participants were informed about the Study prior to taking their views and opinions. This information was given in each tool along with an assurance that the data would be used for research purpose only while maintaining confidentiality.

Research findings of previous researchers have been duly acknowledged in the form of in-text citations and references.

3.10 CONCLUSION

The present chapter of 'Plan and Procedure of the Study' dealt with the descriptive research method. This chapter provided an in-depth overview of the design of the present study, population and sample of the present study and tools of the present study

i.e. questionnaire for teachers, opinionnaire for teachers, questionnaire for resource persons, questionnaire for DIET lecturers, questionnaire for DIET principals, questionnaire for head teachers and observation schedule for in-service teacher training programmes. The present chapter also comprised of comprehensive details regarding various source of data, means of data collection and the techniques adopted for analyzing the data collected in the present Study.

The next chapter of 'Data Analysis and Interpretation' deals with analysis, classification and interpretation of the data collected in the present Study by means of various research tools.