

CHAPTER : III

METHODOLOGY

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CHAPTER : III

METHODOLOGY

3.1 INTRODUCTION

In this chapter an attempt has been made to systematically present the methodology used for the present investigation. The structure of this chapter is as follows :

- Rationale of the study
- Objectives
- Hypotheses
- Explanation of terms
- Delimitation
- Sample
- Tools used
- Data Collection
- Statistical techniques applied to analyse the data

Details regarding the above is presented in the pages to follow.

3.2 RATIONALE OF THE STUDY

Language plays a significant role in the life of human beings. Bernstein (1970), Suggested, that to succeed in education system, a child must know how to use language as a means of learning and how to use it in personal interaction. While researching in to language teaching aspects at primary level, some of the basic questions that arises are :

- How the language is taught in the classroom ?

- If language is taught properly then why students achievement is poor in this subject ?
- What is the nature of activities offered for language teaching ?
- Is classroom interaction carried out the way in which language should be taught ?
- What kind of techniques are adopted in classroom?
- Is the teacher equipped with necessary skills required to teach language?
- Are the objectives of teaching Gujarati properly reflected in syllabus?
- What are the problems of teaching Gujarati?

All these may act as strong demotivating factors on the part of students to learn language. Such demotivating factors may lead to low achievement of students in school subject. According to pattanayak (1990), "Language teaching standards are divergent in different regions of the country. One thing common to all is consistently low standards of achievement in language as well as subjects. Instead of learning subjects through language, Subjects are used to learn languages. Therefore students are poor in subjects as well as language". The author further adds that Indian languages generally have never been discussed it whether English or Hindi should be national official language.

According to the trend report of fourth survey (1990), out of the total number of 4703 studies in Education only 112 (2.38 per cent) have been conducted on languages. Further only 8 ^{studies} students (7.14 per cent) were on Gujarati language. Which seems very much the lower side. A significant point to note that not even a single study have been conducted on Gujarati language at the primary stage. Therefore, naturally it becomes a very important area of research.

The central institute of Indian languages has focused that the study of language in classroom is important for understanding how learning take place through language interaction and how interaction may be significant factor in educational achievement. Bhatt

(1993), studied the achievement of class IV students in Ahmedabad. It was found that mean achievement in general was 50.33 and achievement of boys in Municipal school was 50.46 and that of girls was 48.44. Further the researcher found that students were weak in vocabulary and in the application of language. It was also found that achievement of students in Gujarati subjects was normally low. Brahmhatt (1981), studied the achievement of students in the subjects Gujarati from primary teacher training institution of Gujarat, 468 students from 12 institute were administrated test in Gujarati. Among all other significant findings the mean achievement in the subject of Gujarati was average for the entire sample and significantly low for Baroda district students. Kothari (1996), studied the achievement of class VII students in Karjan Taluka of Baroda District. The mean achievement in Gujarati subject was found to be 52.5. The mean achievement of students in general was 53.3 Sexwise mean achievement was 50.9 and 54.8 for boys and girls respectively. Further castewise the mean achievement of SC, ST, SEBC and General category students was 52.4, 51.9, 50.0 and 53.3 respectively. Only 7.48 per cent of students could score more than 70 per cent marks in Gujarati. So, above studies shows that students are weak in Gujarati language. It is important to study achievement of students in Gujarati language.

For the present study, students who were studying in the upper primary schools were selected because the investigator has an experience of teaching in the upper primary schools managed by private trust for twelve years. In course of her experience as a teacher, she found students were normally weak in Gujarati subject. Together, with her experience as a Gujarati language teacher and the rational presented above, the following major questions were emerged to which the present study will try to answer. The questions are :

- Whether the teachers know the objectives of teaching Gujarati or not ?

- Whether the teaching procedure followed by the teachers are appropriate or not ?
- Whether teacher faces the problem while teaching Gujarati subject ?
- Whether students achievement in subject of Gujarati are poor or not ?
- Whether students committed errors in writing Gujarati or not ?

On the basis of the rational presented above and the researchers questions posed; the problem has been entitled as follows.

3.3 STATEMENT OF THE PROBLEM

AN EXPLORATORY STUDY OF GUJARATI LANGUAGE TEACHING IN UPPER PRIMARY SCHOOLS OF BARODA CITY

3.4 OBJECTIVES OF THE STUDY

The study has been carried out with the following objectives :

- (1) To study the clarity of objectives of teaching Gujarati on the part of teachers.
- (2) To study the teaching procedure followed by the teachers in teaching of Gujarati with respect to ;
 - a) Various skills of Gujarati teaching.
 - b) Various methods and techniques of teaching Gujarati.
 - c) Use of audio Visual aids.
- (3) To study the problem faced by teacher in teaching Gujarati.
- (4) To study the achievement of students in the subject of Gujarati.
- (5) To study the weakness of the students in the subject of Gujarati.
- (6) To identify common errors committed by students in writing Gujarati.

- (7) To study the opinions of teachers about teaching Gujarati.
- (8) To study the relationship between achievement score and weakness score of students of Standard V, VI, and VII

3.5 EXPLANATION OF TERMS

(1) Achievement of students:

Mark scored by students in the year end examination conducted by Municipal school Board, during the academic year 1995-96, in the subject of Gujarati has been considered as achievement of students.

(2) Teaching procedure followed by teachers:

The role of teacher during the instructional situation in terms of various language skills of Gujarati teaching, methods and techniques employed while teaching Gujarati and use of audio visual aids as reflected in the teaching procedure followed by the teacher while teaching prose, poetry and grammar lessons of Gujarati subjects.

(3) Common errors:

The common mistakes committed by students with respect to punctuation mark, spellings, influence of dialects on composition and syntax in the subject of Gujarati have been considered as common errors.

(4) Weakness score:

Score Obtained by students on a test constructed by investigator on the basis of identified common errors. E.g. Actual Score - Achievement Score = Weakness Score. Suppose, a students obtained 20 marks out of 40, in such a case his Weakness Score will be $40-20=20$.

(5) Upper Primary:

Standard V, VI, VII of primary schools recognised by the Government of Gujarat, Gandhinagar was considered as upper primary schools.

(6) Skills of teaching Gujarati Subject :

Four basic skills viz. Listening, Speaking, Reading and writing that are to be inculcated through teaching of Gujarati and Objectives formulated by Gujarat State Pathya Pustak Mandal for upper primary selection are based on above four language skills only.

(7) Caste Category:

In the present study caste category is interpreted as SC, ST, SEBC and General category of students.

3.6 HYPOTHESES

On the basis of above objectives, the following null hypothesis were formulated :

- (1) There will be no significant difference in mean achievement of boys and girls in the subject of Gujarati for Standard V.
- (2) There will be no significant, difference in mean achievement of SC, ST, SEBC General category of students in the subject of Gujarati for Standard V.
- (3) There will be no interaction between caste category and sex in the achievement in the subject of Gujarati for Standard V.
- (4) There will be no significant difference in the mean achievement of boys and girls in the subject of Gujarati for Standard VI.
- (5) There will be no significant difference in the mean achievement of SC, ST, SEBC and General category of students in the subject of Gujarati for Standard VI.
- (6) There will be no interaction between caste category and sex in the achievement in the subject of Gujarati for Standard VI.

- (7) There will be no significant difference in the mean achievement of boys and girls in the subject of Gujarati for Standard VII.
- (8) There will be no significant difference in the mean achievement of SC, ST, SEBC and General category of students in the subject of Gujarati for Standard VII.
- (9) There will be no interaction between caste category and sex in the achievement in the subject of Gujarati for Standard VII.
- (10) There will be no significant difference in the mean weakness score of boys and girls in the subject of Gujarati for Standard V.
- (11) There will be no significant difference in the mean weakness score of SC, ST, SEBC and General category of students in the subject of Gujarati for Standard V.
- (12) There will be no interaction between caste category and sex in the weakness score in the subject of Gujarati for Standard V.
- (13) There will be no significant difference in mean weakness score of boys and girls in the subject of Gujarati for Standard VI.
- (14) There will be no significant difference in the mean weakness score of SC, ST, SEBC and general category of students in the subject of Gujarati Standard VI.
- (15) There will be no interaction between caste category and sex in the weakness in the subject of Gujarati for Standard VI.
- (16) There will be no significant difference in the mean weakness score of boys and girls in the subject of Gujarati for Standard VII.
- (17) There will be no significant difference in the mean weakness score of SC, ST, SEBC and General category of students in the subject of Gujarati for Standard VII.
- (18) There will be no interaction between caste category and sex in the subject of Gujarati for Standard VII.

- (19) There will be no significant relationship between achievement score and weakness score in the subject of Gujarati for Standard V.
- (20) There will be no significant relationship between achievement score and weakness score in the subject of Gujarati for Standard VI.
- (21) There will be no significant relationship between achievement score and weakness score in the subject of Gujarati for Standard VII.

3.7 DELIMITATION OF THE STUDY

The study was delimited to Municipal schools run by Municipal school Board, Vadodara. The study was also delimited to Municipal schools which provide instruction through Gujarati language.

3.8 METHODOLOGY

After formulation of the research problem theoretically, the next task is to find out empirically dependable and valid answers to research questions.

This requires deciding about the research methodology to be used for data collection and analysis and interpretation of results. Methodology of the study involves population, sample, tools to be used, procedures for data collection and statistical techniques to be used for data analysis. The methodological been details have been presented in the pages to follow.

3.8.1 THE NATURE OF DATA

In order to achieve the objectives of the present study, the following data were required.

- Clarity of teachers in relation to objectives of teaching Gujarati.

- Problem faced by teachers while teaching Gujarati.
- Teaching procedure followed by the teachers.
- Achievement of students in the subject of Gujarati.
- Errors committed by students in writing Gujarati.
- Opinion of teachers and experts about teaching Gujarati.

3.8.2 SOURCES OF DATA

The data required for the present study as mentioned above were obtained from the following sources.

- (a) Official records pertaining to location of Gujarati medium schools and number of teachers working in upper primary schools run by the Municipal schools Board, Vadodara were obtained from Nagar Prathmik Shikshan Samiti Baroda (1994-95).
- (b) Data pertaining to the achievement of students of standard V, VI, VII in the subject of Gujarati, were from the final results of the academic year 1995-96 conducted by Municipal school Board.
- (c) The data pertaining to the errors committed by students in writing Gujarati were obtained from the following sources :
 - (i) The teachers who were teaching the subject of Gujarati to the students of Standard V, VI and VII
 - (ii) The class work book, home work book, composition book, and the answer scripts of the unit test of the students of Standard V, VI, VII
 - (iii) Opinion of experts regarding the ideal way of teaching Gujarati were obtained from the field.

3.8.3 POPULATION

Population of the present study comprises of 108 Gijarati Medium Primary Schools, 550 teachers of upper primary schools and all the students of each of the Standards V, VI, VII of Municipal School Board, Vadodara.

3.8.4 SAMPLE

Sample for the presented study was drawn from:

- (a) Schools,
- (b) Teachers,
- (c) Students,
- (d) Experts.

Further Details are given below:

(a) Schools:

There are 138 schools providing primary education through different medium of instructions. These schools are scattered in different areas of Baroda city. These different area are classified in three major sections of Baroda city, viz., section I, section II, section III. The details of schools offering primary Education through different medium and the sections are presented in the following Table 3.1

Table : 3. 1

NUMBER OF PRIMARY SCHOOLS BELONGING TO DIFFERENT MEDIUM ALONG WITH THEIR SECTION

S. No.	Section	Gujarati Medium	Marathi Medium	Hindi Medium	Sindhi Medium	Deaf and Dumb
1	Section I	33	03	07	-	-
2	Section II	37	05	01	04	-
3	Section III	38	06	02	01	01
TOTAL		108	14	10	05	01

Source : Annual Report of Nagar Prathmik Shikshan Samiti, Vadodara (1994 -95)

It observed from the Table : 3.1 there are 108 primary schools of Gujarati medium of which twelve school were selected randomly for observation of teaching procedure.

For the selection of these twelve schools, the following steps were followed.

- All the 108 schools were given a serial number from 001 to 108.
- All the 108 slips were prepared and each slip was given a number starting from 001 to 108.
- Randomly twelve slips were selected by lottery method .

The twelve schools thus selected have been presented in Table : 3.2

Table: 3.2

SCHOOLS SELECTED FOR OBSERVATION OF TEACHING PROCEDURE

S.No.	NAME OF THE SCHOOL	SECTION
1	Sayajigunj Mishra Shala No : 07	I
2	Sayajigunj Mishra Shala No : 11	I
3	Sayajigunj Mishra Shala No : 09	I
4	Sayajigunj Mishra Shala No : 20	I
5	Sayajigunj Mishra Shala No : 22	I
6	Babajipura Mishra Shala No : 03	I
7	Raopura Mishra Shala No : 23	II
8	Raopura Mishra Shala No : 25	II
9	Vadi Mishra Shala No : 03	III
10	Vadi Mishra Shala No : 16	III
11	Vadi Mishra Shala No : 14	III
12	Vadi Mishra Shala No : 15	III

(b) Teachers:

From the office records of Nagar Prathmik Shikshan Samiti (1994-95) , it was found that total number of teachers teaching from Standard I to VII is 1625 and the teachers teaching in upper primary level were 550. For the selection of teachers, the following steps were followed:

- All the 550 teachers were given a serial numbers from 001 to 550.

- All the 550 slips were prepared and each slip was given a number starting from 001 to 550.
- Randomly 400 slips were selected by using random number Table (Kendall and Smith) 400 teachers was drawn randomly. Since some of them have not completed opinionnaire and questionnaire. So finally investigator was able to collect data from 328 teachers.

(c) Students:

For drawing the sample of students, cluster sampling technique was adopted. From the official records of the schools, it was found that there were 1218 students were available in standard V, VI, VII of the sample of schools selected for the present study.

Details regarding there have been presented in Table: 3.3

Table : 3.3

NUMBER OF STUDENTS IN EACH STANDARD

	Standard V	Standard VI	Standard VII	Total
Boys	215	202	203	620
Girls	204	197	197	598
Total	419	399	400	1218
SC	091	123	097	311
ST	127	112	107	346
SEBC	112	098	125	335
General	089	066	071	226
Total	419	399	400	1218

(d) Experts :

To study opinion about the teaching of Gujarati , twenty experts were selected using judgment sampling.

These experts were from primary, and secondary school teachers and teachers from teaching institution of Baroda. The experts were selected on the basis of their long

standing experience (at least 10 years) in teaching the subject, their contribution to Gujarati literature and in investigator's perception about these experts.

3.9 TOOLS

The following tools were used in the study.

- [1] To study the clarity of objectives of teaching of Gujarati, opinionnaire was constructed.
- [2] To study the problems faced by the teachers while teaching Gujarati, questionnaire was constructed.
- [3] To observe the teaching procedure following by the teachers class room observation schedule was constructed.
- [4] To study the opinions of teachers and experts regarding the teaching of Gujarati, interview schedule was constructed.
- [5] To identify common errors committed by the students in writing Gujarati, a common errors identification test was developed.
- [6] To study the achievement of students, scores obtained by students on the final examination of Gujarati in the year 1994-95 were collected from the respective schools.

The details of the above mentioned tools have been given under separate captions.

3.9.1 OPINIONNAIRE FOR TEACHERS

To decide about the aspects for constructing opinionnaire, the following criteria were kept in mind while formulating and selecting the statements.

- The statement might be expression of behaviour and not of the statement of facts.

- The statement might be expressed in clear, concise and straight forward language.
- Ambiguity in the meaning of statement or vague words to be avoided.
- Each statement should have single idea.

On the basis of the above criteria and keeping in view the four basic skills of language teaching viz., listening, speaking, reading and writing, the investigator constructed an opinionnaire consisting of 48 statements. Each statement had five categories viz., always, often, sometimes, seldom and never (details can be found in Appendix: II) After preparing the initial draft, the same was given to five teachers educators and four experienced Gujarati language teacher of primary and secondary schools for their comments and suggestions. Their main task was to examine the coherence between statement and main aspect and suitability of the language. It was felt by the experts that item no. 12 and 23, 40 and 46, and 41 and 48 were focusing on the same aspects and hence item no : 12, 46 and 48 were deleted.

For further validation of the opinionnaire, it was administered on a sample of five teachers and thus tool was finalized consisting of 45 items (details can be found in Appendix : III). The distribution of 45 items have been presented in Table 3.4.

Table : 3.4

DISTRIBUTION OF STATEMENTS IN THE OPINIONNAIRE

S.No.	ASPECT	STATEMENT NUMBER	TOTAL
1	Awareness of Gujarati language teaching	01 - 03	03
2	Development of listening and speaking skills	04 - 23	20
3	Development of reading skill	24 - 36	13
4	Development of writing skill	37 - 45	09
TOTAL			45

For the scoring of the tool, for each item frequency were computed and same as converted in to percentages.

3.9.2 INTERVIEW SCHEDULE FOR EXPERTS

For construction of interview schedule the following criteria were kept in mind.

- The statements might be expression of behaviour and not of statements of facts.
- The statements might be expressed in clear, concise and strait forward language.
- Ambiguity in meaning of statements or vague words to be avoided.
- Statement should have single idea.

In addition to this, the interview schedule focused on the following five areas.

- Language skills
- In-service training,
- Pre- service training,
- Improving standards of Gujarati teaching,
- Modes of evaluating language skills.

The interview schedule had ten structured items (details can be seen from Appendix : VI) After preparing the initial draft, the same was given to five teacher educators and four, experienced Gujarati language teachers of primary and secondary schools for their comments and suggestions. Their main task was to examine the coherence between the items and main aspects and suitability of the language. Examining the interview schedule, the experts opined to delete the item no 06 from the tool and thus the final draft has nine structured items concerning five dimensions (details have been presented in Appendix : VII)

For the scoring of each item frequency were computed and converted in to percentages.

3.9.3 QUESTIONNAIRE FOR TEACHERS

As stated earlier, in order to study the problem faced by the teachers in teaching Gujarati, a questionnaire was constructed by keeping in mind the following criteria:

- The questionnaire should deal with a significant topic.
- The information might be available, should not ask to write in the questionnaire.
- The question should be short and clear.
- The question should seek for one idea at a time and should be arranged in logical sequence.

In addition to this, the questionnaire focused on the following areas:

- Problems related to speech defect faced by the teachers.
- Difficulties faced by teachers in teaching prose, poetry, grammar lessons.
- Facilities available in the school for teaching Gujarati subject.
- Problems related to implementation of textbook knowledge.

Keeping in view the above mentioned dimensions, the initial draft of questionnaire consisting of twenty eight open-ended and close ended questions was constructed (details have been presented in Appendix : IV).

After preparing the initial draft, the same was given to a five teacher educators and four experienced Gujarati language teachers of primary and secondary schools for their comments and suggestions. Their main task was to examine the coherence between the items and main aspects and suitability of the language.

Examining the questionnaire, the experts opined to delete item no 21 and 23 and thus the final draft had 26 items concerning the above mentioned four dimensions (details have been presented in Appendix : V). The distribution of items over different dimensions have been presented in Table 3.5



Table :3.5

DISTRIBUTION OF THE ITEMS IN THE QUESTIONNAIRE

S.No.	ASPECTS	QUESTION NUMBER	TOTAL
1	Problems related to speech defect	01 - 05	05
2	Difficulties in teaching prose, poetry, and grammar lessons	06 - 17	12
3	Difficulties regarding text book	18 - 22	05
4	Physical material available for teaching of Gujarati	23 - 26	04
TOTAL			26

For scoring of the questionnaire, frequencies were computed and the same were converted into percentages wherever possible.

3.9.4 CLASS ROOM OBSERVATION SCHEDULE

For construction of observation schedule the following criteria were kept in mind.

- Selecting the aspects to be observed.
- Defining the aspects to be observed.
- Training the observer.
- Quantifying the observations.
- Developing the recording procedure.

In addition to this, the observation schedule focused on the following five dimensions.

1. Introduction on the content.
2. Model reading.
3. Discussion points which include methods, techniques, and skills adopted by teachers.
4. Evaluation done by the teachers.
5. Black board work of the teachers.

6. Home work given by teachers.

The observation schedule eighty items (details cab be seen from Appendix : VIII). Each items had five categories viz., always, often, sometimes, seldom and never. After preparing the initial draft, the same was given to five teacher educators and four experienced Gujarati language teaching of primary and secondary schools for their comments and suggestions. Their main task was to examine the coherence between questions, main aspect and suitability of the language. It was felt by experts that in the area of introduction, items no. 14, 16 were over lapping, so were deleted and 07 items were added according their valuable suggestions, In model reading out of ten items four deleted as they were measuring the same thing. In discussion , out of forty five, four were deleted as they were over lapping, and from the item of black board work two were deleted as it was representing the same meaning. Aspect of homework two items were deleted as they were overlapping with one another. Aspect of evaluation were remained as they were. For firther validation of the questionnaire, it was administered on a sample of five teachers and thus the too was found consisting of 73 items. (Details are given in Appendix : IX) To check the inter observer reliability, investigator took help of two colleagues from the department as an observer for a week. The training was given to observers by indicating them definite aspects to be observed and were also requested to record and quantify the data. The comparison was carried out to avoid biasness of scorer and to check equally competent scorer obtained the same result or not.

Table 3.6 represents the classification of items according to aspects.

Table : 3.6

**ASPECTWISE CLASSIFICATION OF ITEMS IN THE OBSERVATION
SCHEDULE**

S.No.	ASPECT	NUMBER OF ITEMS	TOTAL
1	Introduction	01 - 15	15
2	Model reading	01 - 06	06
3	Discussion	01 - 41	41
4	Evaluation	01 - 05	05
5	Black board work	01 - 03	03
6	Home work	01 - 03	03
TOTAL			73

For the scoring of each items, frequencies were computed and were converted into percentages.

3.9.5 COMMON ERRORS IDENTIFICATION TEST FOR STUDENTS

In order to identify the areas where students were generally committing errors, the investigator explored two major sources from the twelve sampled schools. The sources were (1) Teachers teaching Gujarati subject in standard V, VI, VII, and (2) Home work, class work not book and composition book of Standards of standard V, VI, VII. Exploring these sources, nine areas were identified they are.

- Nasal sound (Anushwara)
- Spelling errors
- Punctuation mark
- Syntax
- Comma
- Into inverted comma (Avataranchinha)
- Full stop
- Logical sequence of thoughts.

- **Effect of dialect in writing**

On the above mentioned nine areas, separate tests for standard V, VI, VII were developed by the investigator. After preparing the initial draft, the same was given to five teacher educators and five experienced teachers of primary and secondary schools for their comments and suggestions. Their main task was to examine the coherence between the items and main aspects and suitability of the language. Examining the three different tests, it was felt by the experts that item of thought expansion could be deleted as the same aspect can be examined in essay, story and letter writing and thus the draft contained items covering all the nine areas. (details have been presented in Appendix : XI, XII, XIII). The tests were given to twenty five students of each standard V, VI, VII to ensure the time limit and comprehensibility of language. Total 40 marks test was developed and maximum possible score was 40.

Table 3.7 represents the item developed under each area for standard V, VI, VII for common errors tests.

Table : 3.7

**ITEMS DEVELOPED UNDER EACH AREAS AT STANDARD V, VI, VII FOR
COMMON ERROR TESTS**

Standard	Standard V	Standard VI	Standard VII
Areas	DIFFERENT ITEMS COVERED IN THE QUESTIONS		
Nasal Sound	In Sentences, Essay writing, Story writing, Letter writing, Spellings, and Thought expansion	In Sentences, Essay writing, Story writing, Letter writing, and Thought expansion	In Sentences, Essay writing, Story writing, Letter writing, Spellings, and Thought expansion
Spellings	In Sentences, Essay writing, Story writing, Letter writing, thought expansion, Spelling items of words	In Sentences, Essay writing, Story writing, Letter writing, thought expansion, and Spelling items of words	In Sentences, Essay writing, Story writing, Letter writing, thought expansion and Spelling items of words
Punctuation mark, Syntax, Comma, Full Stop, Logical sequence of thoughts, and Effect of dialect, Into inverted comma (Avataran Chinha)	Essay writing, Story writing, Letter writing, Sentences and thought expansion	Essay writing, Story writing, Letter writing, Sentences and thought expansion	Essay writing, Story writing, Letter writing, Sentences and thought expansion

**3.9.6 INFORMATION SCHEDULE FOR ACHIEVEMENT OF STUDENTS IN
THE SUBJECT OF GUJARATI**

An information Schedule was developed to collect the information regarding achievement of students of SC, ST, SEBC and General category of boys and girls students in the subject of Gujarati, in the Annual examination conducted by Municipal school Board, Vadodara during the year April 1995. (Details of the same are given in the Appendix no : X, XV, XVI)

3.10 DATA COLLECTION

For collecting the data from Municipal School Board, Vadodara investigator took the permission letter from administrative officer of Nagar Prathmik Shikshan Samiti Vadodara.

Questionnaire and opinionnaire were prepared with forwarding letters addressed to Municipal School teachers by giving an assurance of keeping respondents' view confidential.

The filling up questionnaire, opinionnaire, and test to identify common errors and achievement of students of standard V, VI, VII examination and for the observation of instructional process investigator requested school principals and teachers for their co-operation.

During the data collection investigator had taken care of clarifying their doubts and checked that none of the responses were left incomplete. This was done to avoid loss in the obtained data for the selected schools. The data pertaining to experts opinions regarding teaching of Gujarati were collected personally by the investigator through personal interview. The experts were consulted earlier and interviews were carried out according to their convenience and without any constraints of time.

The data pertaining to achievement of students in the subject of Gujarati was collected from their respective schools. Details of schedule of data collection given in the table no 3.8

Table : 3.8

SCHEDULE OF DATA COLLECTION

TYPE OF TOOL	DURATION	SAMPLE DISTRIBUTED	RESPONDED
QUESTIONNAIRE	December 1996 to February 1997	550 teachers of Standard V, VI, VII	326 teachers of standard V, VI, VII
OPINIONNAIRE	December 1996 to February 1997	550 teachers of Standard V, VI, VII	326 teachers of standard V, VI, VII
OBSERVATION SCHEDULE	October 1995 to February 1996	Teachers of twelve schools	Whole
COMMON ERRORS TEST	April 1996	Standard V 420 Standard VI 400 Standard VII 400	Standard V 419 Standard VI 399 Standard VII 400
INFORMATION SCHEDULE	May 1996	Standard V 420 Standard VI 400 Standard VII 400	Standard V 419 Standard VI 399 Standard VII 400
INTERVIEW	December 1996 to February 1997	20 experts	20 experts

3.11 DATA ANALYSIS

Data pertaining to objectives 1,2,3,6, and 7 viz., clarity of objectives of teaching Gujarati on the part of teachers, classroom observation, problems faced by the teachers , opinion of experts on teaching Gujarati, and common errors committed by students frequencies were computed and were converted into percentages and whenever possible content analysis was done.

The data pertaining to Objectives 4 and 5 viz., achievement score and weakness score of students of Standard V, VI and VII were analyzed quantitatively by using the technique of Analysis of Variance (ANOVA). Data pertaining to objective 8, viz., relationship between achievement score and weakness score of students, coefficient of correlation was computed using Product Moment Method.

The entire Programme of present piece of research, presented in chapter provides a clear cut direction for the work and thus sets the stage for analysis. In other words ,

how is language teaching carried out by primary school teachers of municipal school board
can be seen in the data analysis. This is the subject matter for the next chapter.