CHAPTER IV

PLANNING OF THE PRESENT STUDY
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4.1 Introduction:

From the reviews of different studies and researches regarding leadership, leadership behaviour, schools and researches regarding leadership, leadership behaviour, school climate, role perception relating to Educational Institutions, it is embibed that majority of investigators have accepted for their studies, a tool prepared and standardized by Halpin and Croft (1964) famous with the abridged name L.B.D.Q. and O.C.D.Q. Of course, a few investigators have developed their own tool. Why majority of the investigators had L.B.D.Q. and O.C.D.Q.? Those studies were conducted from different countries and areas and for different population. One can assume that there is a scarcity for standardize tools measuring O.C.D.Q. and L.B.D.Q. over and above aforesaid tools, itself is very popular at the international level. Investigator may tempted to adopt it for their studies.

Not only that but even the fourth survey of the Educational Research in India (1983-1988) NCERT, 1991, has emphatically commented as follows: (Page 1061)

"These types of studies - design, tools, statistical analysis - were initiated in early '70s at the Centre of Advanced Studies in Education, Baroda. Except for changes in the names of the authors and the years of the completion of the studies, one hardly comes
across any development in the formulation of the problem, scope and methodologies of the studies during the last 13 to 15 years.

The stagnation seems to be true even in the centre that pioneered such research. This would be evident from the reviews in the previous three surveys (Buch, 1974, 1979, 1986) and studies now included in this volume.

To derive a more comprehensive and systematic frame of organizational behaviour, studies are needed alongwith the leadership, organizational climate on decision making, motivation in work-situations, group dynamics and team building, conflict-management, interpersonal relationship and communications in organization studies on most of these critical problems are totally absent.

Research on organizational behaviour derives its inspirations from the goal of organizational development. These studies do not document a single case elaborating the process of organization development incorporating all components of organizational behaviour. Mukhopadhyaya (1985) documented some experiments on organizational development but not comprehensive research is available. In order to bring research on organizational behaviour in education to professional level, researches have to be initiated in many of these critical issues, to bridge the existing gaps”.

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For the present studies main focus was to study the school climate and role perception of teachers, Headmasters and school organizers, investigator felt that absolutely different tool must be developed. The role perception was the added dimension in the present study. Investigator felt that tool prepared by Helpin and Croft (1964) will not serve the purpose to greater extent. This tool is comparatively older one. Higher secondary schools in Gujarat from 1976. The target group of the present study is teachers and headmasters of the Gujarat State. Investigator had decided to construct own tools. As a result four questionnaires and four interview schedules have been developed. Before that, investigator has tired to acknowledge various research tools with regard its form, nature, construction and utilization purposes for the finalization of the tools for the present study. Some have been detailed out lines to follow.

4.2 Methods of Research:

It embibed from the review work that there are different methods of research are utilized by the different investigators regards to their problem of research. Investigator has also acknowledge that different methods from some standard books on Research Methods a brief reviews of the same methods are as follows:
Rigid formulation of method impossible. Rummel has observed, "since no two research undertakings are exactly alike it is impossible to set forth any rigid formulation of method or procedure. There is a wide variation in conditions and circumstances which determine the objective nature of research problems in different fields. The purpose of a study may vary from researcher to researcher in terms of where it is to be conducted and the applications that are to be made of it. In addition, great differences in the capacities and characteristics among the individuals who do research work are a proved fact. Thus all methods defy portrayal in term of formula or standardization".

4.2.2 Classification of Methods:

Carter V. Good, A.S. Barr and Dougals E. Scates classify the methods of research as under:

i) **Field**: to which applied education, history philosophy, psychology etc.

ii) **Purpose**: description, prediction, determination of status etc.

iii) **Place**: where it is conducted; in the laboratory in the field.

iv) **Application**: Pure research or applied research.

v) **Data gathering devices employed**: tests, rating, scales, questionnaires etc.
vi) **Character of data collected**: Objective or subjective.

v) **Symbols**: Employed in recording, describing, or treating results; mathematical symbols or language symbols.

viii) **Form of thinking**: deductive, inductive etc.

ix) **Control of factors**: Controlled and uncontrolled experimentation.

x) **Methods**: Employed in establishing causal relationships; agreement, difference, residues and non-commitment.

Generally speaking most of the authors agree on three basic categories.

4.2.3 **Historical**: which is concerned with the past and attempts to trace the past as a means of seeing the present perspective.

4.2.4 **Survey**: which is concern with the present and aims at determining the status of the phenomenon under investigation.

4.2.5 **Experimental**: which is oriented towards the discovery of basic relationship among phenomena as a means of predicting and eventually controlling their occurrence.

This classification is based on two factors:

(i) **Time**; and (ii) **Purpose of investigation**
4.2.6 Survey Method: (Normative method):

The survey has been derived from the word “Sur” or “Sor” and ‘veeir’ or ‘veior’ which means ‘over’ and ‘see’ respectively. Normative survey deals with “what is” its scope is very vast. It describes and interprets what exists at present. In a normative survey we are concerned with conditions or relationship that exist; practices that prevail, beliefs, points of views or attitudes that are held, processes that are going on, influences that are being felt and trends that are developing.

Purposes:

1. Although the major purpose of descriptive research in education is to tell “What is” many surveys do go beyond a mere description of the existing situation. For instance, survey dealing with curriculum can help us in obtaining information not only about strengths and weaknesses of current curriculum but also can elicit recommendations for change.

2. Descriptive surveys are often carried out as a preliminary step to be followed by research employing more vigorous control and more objective methods.

3. Descriptive studies also serve as the direct sources of valuable knowledge concerning human behaviour.
4. Descriptive studies help us in planning various educational programmes. School census is perhaps, the most universal application of descriptive method is to educational planning.

The educational surveys deals with the instructional programme and related policies and procedures that determine the educational programme. With the reviews of above research methods. Investigator decided the method to be utilized for the present study is survey. Method, looking to the nature of problem of present study. After finalization of the method of research, investigator acknowledge the different tools for the research work.

4.3 Research Tools:

The progress of mankind depends upon well conducted research programmes postulates sufficient, reliable and valid facts. Such facts are obtained through a systematic procedure. Each data collecting device has both merits and demerits. Each research tool should be appropriate in a given situation to accomplish a particular purpose. It may be stressed that these tools may be used in combination. They supplement the work of right each other.

John Best rightly observes, like the tools in the carpenter’s box, each research tool is appropriate in a given situation to accomplish a particular purpose.
Some experts have classified varied research tools as follows:

Tools of research

A. Inquiry Forms:
   i. Questionnaire
   ii. Schedule
   iii. Checklist
   iv. Rating scale
   v. Score card
   vi. Attitude scale

B. Observation

C. Interview

D. Sociometry

E. Psychological test:
   1. Achievement test
   2. Aptitude test
   3. Intelligence test
   4. Interest inventory
   5. Personality measures

With the careful study of various tools of research investigator has decided to accept and prepare a questionnaire considering different aspect of problem and the nature of data to be essential for the reliable study. The questionnaires are prepared on the following aspects of the study.
1. Organizational goal
2. Infrastructural facilities
3. Personal management
4. Participative teaching-learning process
5. Financial management
6. Management of available resources
7. Results of the public examination
8. Self-learning at +2 stage
9. Organizational scheme to involve the personnel
to achieve institutional goals.

The details description of the tools as follows:

4.4 **Tool to study school climate:**

To study the school climate of higher secondary schools. Investigator has to finalize components for the survey of higher secondary schools for that investigator has followed the procedure as follows:

1. Study of the different of school climate, accepted by past researchers for these studies.

2. Controlled some available experts and recognized research guide for the said subject.
3. Consulted some familiar Headmasters of progressive higher secondary schools for the return work and managerial identification of their school processes. As a result investigator could arrive on following components of school climate.

A. Organizational goal
B. Infrastructural facilities
C. Personnel management
D. Participative teaching learning process
E. Financial management
F. Management of available resources
G. Results of the public examination
H. Self-learning at +2 stage
I. Organizational scheme to involve the personnel to achieve institutional goals.

More or less there was an agreement among experts for these components to study school climate.

(ii) Having defined the various components next task before the investigator was to frame various questions for each component on
the basis of the discussions with experts in the field and experienced principals, investigator prepared a series of items for each component.

(iii) The first draft of the questionnaire was prepared. All the items were written along with the main component. This draft was given to experts for their comments. Experts were asked to examine the coherence between the main component and items included for that component. Finally on the basis of the suggestions, necessary modifications were carried out. As a result the tool with nine aspects having 45 questions was ready.

(iv) The draft having forty five items was administered to five principals of the schools, for pilot study. Purpose here was to know about language aspect and expected time. The results of pilot study revealed that tool was up to the mark.

(v) Finally tool was ready. Aspect wise details of questions have been presented in Table 4.1.
Table 4.1

Aspectwise Distribution Of Items School Climate

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Aspect</th>
<th>No. of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Organizational goal</td>
<td>03</td>
</tr>
<tr>
<td>2</td>
<td>Infrastructure Facilities</td>
<td>06</td>
</tr>
<tr>
<td>3</td>
<td>Personnel Management</td>
<td>05</td>
</tr>
<tr>
<td>4</td>
<td>Participative Teaching Learning Process</td>
<td>05</td>
</tr>
<tr>
<td>5</td>
<td>Financial Management</td>
<td>06</td>
</tr>
<tr>
<td>6</td>
<td>Management of available resources</td>
<td>07</td>
</tr>
<tr>
<td>7</td>
<td>Results of the Public Examination</td>
<td>01</td>
</tr>
<tr>
<td>8</td>
<td>Self-Learning at +2 stage</td>
<td>05</td>
</tr>
<tr>
<td>9</td>
<td>Organizational scheme to involve the personnel to achieve institutional goals</td>
<td>07</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>45</td>
</tr>
</tbody>
</table>

A forwarding letter was also drafted for the principals for their kind co-operation. The respondents were asked to tick mark (√) on 'Yes' or 'No' against each statement. To establish the content validity of the questionnaire, ten experts in the field were consulted. It was reported by the experts, the number of questions in each aspect were sufficient. This indicated that tool has content validity [Final version of the tool is in Appendix-1]
4.5 **Questionnaire to study Role Perception of Principal:**

To study the role perception of the principal of the higher secondary schools a questionnaire was constructed. (i) Investigator was interested to analyze the role perception of the principal, as defined in theoretical perspective, which was the outcome of references of various books and consultation with experts in the field. As a result investigator could arrived on following components of Role Perception.

(A) Aspiration of an individual working as a principal.
(B) Analysis of job satisfaction
(C) Leisure time activities
(D) Relationship with staff
(E) Evaluation as successful teacher
(F) Interface and Intraface Relationship

More or less there was an agreement among expert for these components to study the role perception of principals.

(ii) Having defined the various components next task before the investigator was to frame various questions for each component on the basis of discussion with experts in the field and experienced Principals investigator prepared a series of items for each component.

(iii) The first draft of the questionnaire was prepared. All the items were written along with the main component. This draft was
given to experts for their comments. Experts were asked to examine the coherence between the main component and items included for that component. Finally on the basis of suggestions, necessary modifications were carried out. As a result the tool with six aspects having 34 questions was ready.

(iv) The draft having thirty four items was administered to five principles of the schools, for pilot study, purpose here was to know about language aspect and expected time, the result of pilot study revealed that tool was upto the mark.

(v) Finally tool was ready, aspectwise details of questions have been presented in the Table No.4.2.

Table 4.2

Aspectwise distribution of item - Role perception of Principal

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Aspect</th>
<th>Nos. of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aspiration of an Individual working as a principal</td>
<td>05</td>
</tr>
<tr>
<td>2</td>
<td>Analysis of Job satisfaction</td>
<td>05</td>
</tr>
<tr>
<td>3</td>
<td>Leisure time Activities</td>
<td>05</td>
</tr>
<tr>
<td>4</td>
<td>Relationship with staff</td>
<td>05</td>
</tr>
<tr>
<td>5</td>
<td>Evaluation as a successful teacher</td>
<td>06</td>
</tr>
<tr>
<td>6</td>
<td>Interface and Intraface relationship</td>
<td>05</td>
</tr>
</tbody>
</table>

Total: 31
A forwarding letter was also drafted for the principals for their kind cooperation. To establish the content validity of the questionnaire, ten experts in the field were consulted. It was reported by the experts that the number of questions in each aspect were sufficient. This indicated that tool has content validity [Final version of the tool is in Appendix]].

4.6 Questionnaire to study Role perception of teachers:

To study the role perception of teachers of higher secondary schools a questionnaire was constructed.

(i) Investigator was interested in thorough definition of role perception with respect to higher secondary teachers, so various books and experts have been consulted as a result investigator could arrived on following components of role perception.

A. Aspiration of an individual working as a teacher
B. Job satisfaction analysis
C. Leisure Time Activity
D. Relationship with staff and students
E. Evaluation as a successful teacher
F. Interaction with content
G. Contribution as a catalyst

H. Teacher-Qualities-Personal Factor check with qualities

(i) Conflict between individual goal and organizational goal.

More or less there was an agreement amongst experts for these components to study the role perception of teachers of higher secondary school.

(ii) Having defined the various components, next task before the investigator was to frame various questions for each component on the basis of discussion with experts in the field and experienced principals and teachers investigator prepared a series of items for each component.

(iii) The first draft of the questionnaire was prepared. All the items were written along with the main component. This draft was given to experts for their comments. Experts were asked to examine the coherence between the main component and items included for that component. Finally on the basis of suggestions, necessary modifications were carried out. As a result the tool with nine aspects having sixty six questions was ready.

(iv) The draft having sixty six items was administered to five teachers of the higher secondary schools for pilot study. Purpose
here was to know about language aspect and expected time. The result of pilot study revealed that tool was up to the mark.

(v) Finally tool was ready. Aspectwise details of questions have been presented in Table 4.3

Table 4.3

Aspectwise distribution of items - Role Perception of Teachers.

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Aspect</th>
<th>Nos. of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aspiration of an Individual working as a teacher</td>
<td>09</td>
</tr>
<tr>
<td>2</td>
<td>Analysis of Job satisfaction</td>
<td>06</td>
</tr>
<tr>
<td>3</td>
<td>Leisure time Activities</td>
<td>05</td>
</tr>
<tr>
<td>4</td>
<td>Relationship with staff and students</td>
<td>08</td>
</tr>
<tr>
<td>5</td>
<td>Evaluation as a successful teacher</td>
<td>09</td>
</tr>
<tr>
<td>6</td>
<td>Interface and Intraface relationship</td>
<td>10</td>
</tr>
<tr>
<td>7</td>
<td>Contribution as a catalyst</td>
<td>06</td>
</tr>
<tr>
<td>8</td>
<td>Teacher qualities - Personal factor - check with the qualities</td>
<td>07</td>
</tr>
<tr>
<td>9</td>
<td>Conflict between individual and organizational goal</td>
<td>06</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>66</strong></td>
</tr>
</tbody>
</table>

A forwarding letter was also drafted for the teachers for their kind co-operation. The respondents were asked to tick mark on ‘Yes’ or ‘No’ against each statement. To establish the content validity of the questionnaire, ten experts in the field were consulted.
It was reported by the experts, the number of questions in each aspect were sufficient. This indicate that tool has content validity [Final version of the tool is in Appendix III].

4.7 Questionnaire to study Role perception of school organizers:

To study the role perception of school organizers of the higher secondary school a questionnaire was constructed.

(i) Investigator was interested in thorough definition of role perception with respect to school organizers of higher secondary schools so various books and experts have been consulted, as a result investigator could arrive on the following components of role perception with respect to school organizers.

A. Aspiration of an individual working as a school organizers

B. Leisure time activities

C. Interface and Intraface relationship

D. Organizational goal

More or less there was an agreement amongst experts for these components to study the role perception of school organizers.
(ii) Having defined the various components next task before the investigator was to frame various questions, for each component on the basis of discussions with experts in the field and experienced school organizers investigator prepared a series of items for each component.

(iii) The first draft of the questionnaire was prepared. All the items were written along with the main component. This draft was given to experts for their comments. Experts were asked to examine the coherence between the main component and items included for that component. Finally on the basis of the suggestions, necessary modifications were carried out. As a result the tool with four aspects having twenty one questions was ready.

(iv) The draft having twenty one items was administered to five school organizers of the higher secondary schools, for pilot study purpose here was to know about language aspect and expected time. The result of pilot study revealed that tool was upto the mark.

(v) Finally tool was ready. Aspectwise details of questions have been presented in Table 4.4.
Table 4.4

Aspectwise distribution of items - Role Perception of School Organizer

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Aspect</th>
<th>Nos. of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aspiration of an Individual working as a School Organizer</td>
<td>06</td>
</tr>
<tr>
<td>2</td>
<td>Leisure Time activities</td>
<td>05</td>
</tr>
<tr>
<td>3</td>
<td>Interface and Intraface Relationship</td>
<td>06</td>
</tr>
<tr>
<td>4</td>
<td>Organizational Goal</td>
<td>04</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>

A forwarding letter was also drafted for the school organizers for their kind co-operation. The respondents were asked to tick mark (✓) or ‘Yes’ or ‘No’ against each statement. To establish the content validity of the questionnaire, ten experts in the field were consulted. It was reported by the experts, that the number of questions in each aspect were sufficient. This indicated that tool has content validity. [Final version of the tool is in Appendix J].

4.8 Interview schedule for Principal To study school climate:

As the school climate is the outcome of an interaction processes under institution, investigator, for strengthening data based support to questionnaire. The data decided to have personal interviews with the respondents.
On the basis of the same aspect as mentioned 4.3 (i) questions were designed. Here also experts were consulted and necessary modifications were carried out. In the same aspects questions were kept while in some aspect only the main theme was included. Finally there were 3 items in the organizational goal, five sub-points for infrastructural facilities, five sub-points for personnel management; three sub-points for participative teaching-learning process, 5 sub-points in financial management, 7 sub-points in management of available resources, one point for result of the public examination, five sub-point for self-learning and five point for self-learning and involve the personnel to achieve institutional goal. In all there were 39 items in the interview schedule [This interview schedule is in Appendix].

4.9 Interview Schedule for Principal to study Role Perception:

The interview was pre-schedule and interaction based regarding questionnaire aspect and cross checking purposes, including observation, belief and behavioural specification for the interactive events. For interview keeping in mind above mentioned objectives and above some specific questions are also utilized for the scheduling/ interview. The details of scheduled are presented herewith.
Looking to the limitations of the questionnaire, investigator felt that there should be cross examination also as a result interview schedule was also designed.

On the basis of the same aspect as mentioned in 4.4 (i) questions were designed. Here also experts were also consulted and necessary modifications were carried out. In some aspect questions were kept, while in some aspect only the main theme was included. Finally there were 5 items in aspiration of an individual working as a principal, 5 sub-points for analysis of job satisfaction, 5 sub points for Leisure time activities, 5 sub-points for relationship with staff 5 sub-points for evaluation as a successful teacher, and 5 sub-points for interface and intraface relationship were included. In all there were thirty items in the interview schedule. [This interview schedule is in Appendix V].

4.10 Interview schedule for Teacher to study Role Perception:

Looking to the limitations of the questionnaire investigator felt that there should be cross-examination also. As a result interview schedule was also designed for the purpose.

On the basis of the same aspects as mentioned in 4.5(i), questions were designed. Here also experts were consulted and necessary modifications were carried out. In some aspects questions were kept, while in some aspect only the main theme was included.
Finally there were 5 items for aspiration of an individual working as a teacher, 5 sub-points for job satisfaction analysis, 5 sub-points for leisure time activities, 5 sub-points for relationship with staff and students, 8 sub-points for evaluation as a successful teacher, 6 sub-points for interaction with content, 6 sub-points for contribution as a catalyst 1 point for teacher qualities - personal factors check with the qualities and 5 sub-points for conflict between individual goal and organizational goal were included. In all there were 46 items in the interview schedule. [This interview schedule is in Appendix VII].

4.11 Interview schedule for school organizers to study Role Perception:

Looking to the limitation of the questionnaire investigator felt that there should be cross-examinations also as a result, interview schedule for the purpose was also designed.

On the basis of the same aspects as mentioned in 4.6(i) questions were designed. Here also experts were consulted and necessary modifications were carried out. In some aspects questions were kept, while in some aspect only the main theme was included. Finally there were 5 items for Aspiration of an individual working as a school organizers, 5 sub points for leisure time activities, 6 questions for interface and intraface relationship and 4 questions for
organizational goal were included. In all there were 20 items in the interview schedule. [This interview schedule is in appendix 附录].

4.12 Sample:

By studying the samples of a define population researcher aims at making generalization, which can be applied to the population. Thus a representative sample is essential. For the present study three different types of samples were needed. The population for present study was all the higher secondary schools in the state of Gujarat. Since the data was to be collected from Principals, School Teachers, and school organizers, all of them constitute the population. There were 1760 higher secondary schools in the year 92-93 as per the statistics show in the report of commissioner of higher education, Gandhinagar [(Page 38) published in 1992] in the Gujarat.

For selecting school principals entire state was divided in to four zone i.e. East, West, North and South, Number of schools in each zone was 672, 330, 346 and 412 respectively. From each zone Principals were selected randomly. The number of principals included from each zone is presented in Table No.4.5
Table 4.5

Numbers of Principals from each zone

<table>
<thead>
<tr>
<th>Zone</th>
<th>East</th>
<th>West</th>
<th>North</th>
<th>South</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Nos. of Principals</td>
<td>672</td>
<td>330</td>
<td>346</td>
<td>412</td>
</tr>
<tr>
<td>Nos. of Principals selected in a sample</td>
<td>75</td>
<td>41</td>
<td>44</td>
<td>46</td>
</tr>
</tbody>
</table>

These sample was drawn by stratified sampling. The questionnaires were sent to 250 principals. Finally data were available from 206 principals.

For selection of the teachers same method was followed. From four zones schools were selected and from the same schools from which principals were selected two teachers were randomly selected. Thus 500 teachers were included in the sample. Finally data were available from 412 teachers.

Following table shows nos. of teachers selected for the sample.
**Table 4.6**

Numbers of Teachers from each zone

<table>
<thead>
<tr>
<th>Zone</th>
<th>East</th>
<th>West</th>
<th>North</th>
<th>South</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nos. of Teachers selected in a sample</td>
<td>150</td>
<td>82</td>
<td>88</td>
<td>92</td>
</tr>
</tbody>
</table>

4.13 **Administration of the tool:**

After developing valid tools for collection of the data, the next task before the investigator was to contact Principals, Teachers and Organizers for collecting their responses. Since whole state area, was involved in the study, the task itself was time consuming. Initially it was decided to send all tools to the respective schools by post. The data collection was carried out zone-wise. In the beginning, a bunch of tools containing four questionnaires, to study the (i) school climate, (ii) Role perception of Principals (iii) Role perception of Teachers and (iv) Role perception of school organizers were sent to the Principals of the schools included in the sample for the study. All the tools have a forwarding letter explaining the purpose to look after the following process for the administration of the tools:
(1) Collect the bio-data of the concern teachers;

(2) Completion of responsive work with in the time;

(3) Personal interview and handover work to investigator.

Investigator was able to visit about 100 schools personally. Principals of the rest of the schools were requested to send the tools through post. After collection of responses of questionnaires from the sampled schools, principals, teachers, and organizers and conducting analysis work. In second phase investigator has started to account personal interview according to predecided schedule, for that some selected Principal, Teachers and School organizers have been interviewed. The dates of the interview were communicated to the respective principals well in advance, alongwith bunch of tools.

Finally investigator could interviewed 80 Principals, 140 Teachers and 55 school organizers throughout the state. this was possible in the same 80 schools as reported earlier. Thus investigator spent atleast a day in one school for collection of data. On and average forty five minutes were spent for interviewing school Principals. Almost same amount of time was spent for teachers and organizers of the school. For the schedule interview for some schools, in the benefit of the study, investigator has to devote more time.
Data collection was carried out zone-wise. Investigator has to spent five to six months for zone. But when data collection work of first zone was in progress, tools for the second zone were also dispatched. This was to utilize time economically. thus investigator was able to collect data almost with in eighteen months. It was a painstaking task, since the distance to be covered was so large, it was a matter of great pleasure, that investigator could establish rapport with principals, teachers, and organizers. They co-operated well. During conduct of interview purpose of interview was very well explained to the respondents. The questions were asked in a definite order. Wherever needed enough time was given to respondents. Responses were immediately recorded.

4.14 Data analysis:

In questionnaires against each question to alternative viz. 'Yes' or 'No' were provided. Respondents were requested to put tick mark [✓] on that.

Frequencies for 'Yes' or 'No' responses were computed. This frequencies were converted to percentages. To study the trend of responses chi-square test was applied.

For the present study interviews were conducted with teachers, principals and school organizers of the schools covered under sample. Responses available from interviews were analyzed
with the help of content analysis technique. Wherever possible frequencies were computed and same has been converted into percentages.

The chi-square test represent a useful method of comparing available results with those to expected theoretically on some hypothesis. The difference between observed and accepted frequencies are squared and divided by the expected number in each case and some of these quotients is chi-square. The more closely the observed results approximate to the expected, the smaller the chi-square and closer the agreement between observed data and the hypothesis being tested. Contrarywise large the chi-square the greater the probability of a real divergence of available results from expected results.

For the present study data was analyzed using $X^2$ test. Respondents were suppose to give their response for each statement by putting tick mark [✓] on ‘Yes’ or ‘No’. Frequencies were computed statementwise for response ‘Yes’ or ‘No’. Finally to study the difference in response $X^2$ test was applied.

For the present study interviews were conducted with principals, teachers and school organizers of the schools. Responses available from interviews were analyzed with the help of content
analysis, technique, wherever possible frequencies were computed and same have been converted to percentages.

"Content analysis is a research technique for the objective, systematic and quantitative description of the manifest content of communication". The raw material for the research workers using the content analysis technique may be any form of communication, usually written materials, but other form of communication such as music, picture or gestures should not be excluded. Text books, high school compositions, novels, news papers, magazine advertisements and political speeches are but a few sources available.

Content analysis is often used in conjunction with observational studies. The researcher tape recorder, class-room verbal behaviour, for example, and make a typed transcript from the audio-tape. The content of the transcript is than analyzed in order to measure variables formulated by the researcher.

Most of content analysis in education have been aimed at answering questions directly, relating to the material analyzed. These analyses have generally been concern with fairly simple classifications or tabulations of specific information.

"Content analyses refer to a group of techniques that have been designed for the analysis of verbal communications. The techniques are appropriate for the analysis of a great range of
communications, including those to be found in text books, lectures, informal teacher pupil interactions, written composition of pupils and other sources.

For the questionnaires, analysis was carried out statement wise. For each statement percentages of responses for ‘Yes’ and ‘No’ were computed and described. Chi-square was computed for each statement separate tables were prepared and accordingly results were discussed.

The responses available from interviews were analyzed qualitatively wherever possible a definite trend was found out with the help of percentages content analysis technique was applied for this purpose.