METHODOLOGY
CHAPTER III

METHODOLOGY

Research methods are of utmost importance in a research process. They describe the various steps to be adopted in solving a research problem, such as the manner in which the problems are formulated, the definition of terms, the choice of subjects for investigation, the validation of data-gathering tools, the collection, analysis and interpretation of data, and the processes of inferences and generalizations.

The methodology of educational research is a vast field of growing literature combing various approaches to suit different problems relating to a wide variety of study areas of education.

All researches, in fact, involve the elements of observation, description and the analysis of what happens under certain circumstances. A rather simple three point analysis may be used to classify educational research. Practically all studies fall under one, or a combination of these types.

HISTORICAL RESEARCH

Historical research attempts to establish facts so as to arrive at conclusions concerning past events. The process involves investigating, analyzing and interpreting the events of the past for the purpose of discovering generalizations that are helpful in understanding the past, understanding the present and to a limited extent, in anticipating the future.

DESCRIPTIVE RESEARCH

Descriptive research involves the description, recording, analysis and interpretation of conditions that exist. It involves some type of comparison or contrast and attempts to discover relationships between existing non-manipulated variables. In descriptive research, variables that exist or have already occurred are selected and observed. Descriptive studies are more than just a collection of data; they attempt to ascertain significant inter-relationships among phenomena.

The descriptive method has undoubtedly been the most popular and most widely used research method in education. The problems in education directly involve people and the situations precipitating these problems are constantly in a
state of change. To keep abreast of changes, descriptive studies conducted at different intervals with representative group of people prove to be immensely helpful.

**EXPERIMENTAL RESEARCH**

The next broad category of educational research involves experimentation. The experimental research describes what will be when certain variables are carefully controlled or manipulated. The focus is on variable relationships. Whenever an independent variable can be manipulated, an experimental approach can be used. Experimental research differs from descriptive studies in that the researcher has some degree of control over the variables involved and the conditions under which the variables are observed. The researcher deliberately manipulates some aspect of the experiment in which he is interested. He causes certain things to happen, and he observes how the condition is affected or changed. He tests the hypothesis and accepts or rejects it, in the light of the controlled variable relationship that he has observed.

RESEARCH CONSIDERATION OF THE PRESENT STUDY

In the light of the above discussion, the present study could be said to fall under the descriptive survey method. The choice of the method of research is determined by the nature of the problem. In this study, the investigator seeks to examine the impact of preschool education on the social development of children between the age of 3 and 6 years.

The following pages of this chapter deal with the techniques and tools that have influenced this study. These are (i) cross sectional study (ii) the observational technique and (iii) interview. They are described on their own merits, with and without reference to the present study.

THE LONGITUDINAL VERSUS THE CROSS-SECTIONAL STUDY

From the conservative point of view there are two standard methods of gathering data about children's behaviour and development. In one of these, the investigator makes repeated observations on the same group of subjects. In the cross-sectional approach different groups of subjects at different stages of development are studied simultaneously. This approach has been most widely used because the researcher can within a short span of time, study the behaviour that is typical of children at different stages of development.

The present investigation is one that comes under this
category. In many problems in the study of development, either of the two methods may be used. The longitudinal programme takes a longer period of time than the cross-sectional. The present study would have taken a longer period if the longitudinal method was used. Moreover, it is not possible to describe the stages of normal social development step by step, month by month within the pre-school ages of 3 to 6 years on account of too many individual differences. For this reason the longitudinal technique appears to be inefficient and cumbersome and there is no doubt that the literature contains relatively few reports of repeated measurements over long periods of time. 5

Though the longitudinal study is time-consuming yet it is considered a sounder method than the cross-sectional. The longitudinal technique provides a significant picture of growth not present in the successive cross-sections of development for different groups.

Nevertheless, whether cross-sectional or longitudinal — both these approaches have contributed immensely to the field of sociology, psychology and education.

As a data gathering device the investigator has utilized the observation method and the Interview which are

the most commonly used devices in descriptive survey method.

**OBSERVATIONAL TECHNIQUES**

Observation methods have occupied an important place in descriptive educational research. It is the oldest and most commonly used instrument of studying child behaviour. Direct observation includes observing and associated recording and analysis of naturally occurring events.

Observation as a research technique must always be expert and directed by a specific purpose. It is neither haphazard nor unplanned. The planning for observation includes definition of specific activities or units of behaviour to be observed, the nature of the groups of the subjects to be observed, the scope of observation - individual or group, determination of the length of each observation period, deciding about the tools to be used in making the observation and recording etc.

Observation may be either participant or non-participant. In the participant observation, the observer becomes more or less one with the group, under observation. In such situations the observer will be in sight of the person being observed and may actually take part in some activity with the observed individual or group.

6. Ibid. P. 166
In the non-participant observation, the observer takes a position where his presence is not disturbing to the group. He may follow in detail the behaviour of one individual or may describe one or two behavioural characteristics of a dozen or more individuals.

How naturally or unnaturally a child behaves in the presence of an observer is a question that has often been asked. What can one do to minimize the influence of the observer upon the behaviour he records? Very often the observation is done from behind the one-way vision screen so that the child does not see the observer. But this is not always a practical solution. So, instead of trying to hide, the observer can first get acquainted with his subjects and others who are likely to be on the scene and then play his part as a non-evaluating, impartial, non-participating, non-directive and friendly person with interest in children. Much observed children get habituated to the presence of an outsider very quickly. The child cannot entirely stop being himself for long because he is being watched — and time has "a tranquilizing effect".

Effective observation is basic to comprehensive child study. Studying one child in depth will give us a deeper understanding with which we can acquire a broader knowledge of children.

all children. Through observation over a period of time, we can determine the child's characteristic pattern of response, his feeling and convictions and his perception of the world around him.

It is not usually possible to observe behaviour continuously for long periods because of the expenses and dynamic nature of behaviour. One of the techniques employed is that of time sampling.

Time-sampling consists of observation of behaviour of an individual or a group for definite short periods of time and recording of occurrence or non-occurrence of objectively defined forms of behaviour during each period. In the present study the children were observed twice or thrice every month throughout the year, and their rate of social development was recorded on the schedule with an intervention of two or three months. Inferences were drawn at the end of the observation period.

Most of the time sampling studies have been concerned with the social behavior and social interactions of young children. Among the specific behaviours studied by this time sampling technique are friendship patterns, quarrels, physical contacts, ascendent behaviour, resistance, co-operative and competitive behaviour, rivalry, aggression etc. Time sampling does not work when the behavior under study is neither overt nor readily observable.

Obtaining meaningful results from an observational study
also demands that the sample of observed behaviour be representative. To reduce the time, expense and volume of data from continuous observations of behaviour, special data sampling procedures are employed. One such procedure is the incident sampling where only specified behavioural incidents are noted and recorded.

The present study in an attempt to find out the impact of pre-school education on the social development of children. Since small children can neither understand our queries nor express themselves clearly, the best way to study their behaviour is by means of observation. In this study the social behaviour of the children were best observed and analysed by means of naturalistic observation. As the name implies, naturalistic observation is observing of things as they naturally happen. We cannot always control nature, nor bring it into the laboratory. We have to take it the way it is. Social characteristics like friendship, independence, leadership, co-operation, self-confidence etc. can be best studied by direct observation. Data collected through direct observation may be often more real and true than data collected by any other method.

The investigator in this study drew up a comprehensive observation schedule to elicit the required information regarding the social development of pre-school children. The schedule covered some broad aspects of social behaviour such as:-
(a) Nature of play
(b) Friendship
(c) Dependence/Independence
(d) Aggression
(e) Dominance/Submission
(f) Co-operation/Competition
(g) Sex-related behaviour
(h) Social Acceptance

Some other traits of social behaviour such as table manners, greeting people, toilet habits, leadership etc. were also covered in the observation schedule. Each broad aspect of behaviour, covered specific behaviour-patterns which were to be kept under careful consideration while observing the children and noting down their rate of development. The sample for the study consisted of both school going and non-school going children. (For a detailed description of the procedure involved in preparing and using the observation schedule in this study, please refer chapter IV 'Sampling and Field Study' page 59.)

An adequate observation record should begin with the necessary descriptive information on the setting: date, time, place and situation. The child’s name and age, if known should be recorded along with the sex. All this is useful more particularly if the child is unfamiliar to the observer. In this study a personal data sheet was prepared for each child. The income, occupation and educational qualification
of parents also gives us indication about the type of family the child comes from and about his socio-economic status. (See Appendix B for the detailed information sheet used in this research work)

An investigation succeeds or fails depending upon the ability of the observer to note down observations accurately. Observation must be valid and reliable. Only those incidents of behaviour that are truly significant must be identified and observed. In other words, the observer must know just what to look for. In observing children, only observed facts should be considered and prejudices guarded against. To achieve a satisfactory degree of reliability it is always better to supplement the knowledge and skill of the researcher with the judgement of others expert in the field. The quality of observations improves substantially when observers get together after each observational phase to discuss their observations. Trivialities soon drop out of their recordings, the observations become more focussed and accuracy of their observations improve.

Best (1977, p. 178) is of the opinion that both reliability and validity of observational measurement are improved when observations are made at frequent intervals by the same observer, or when several observers record their observations independently.
INTERVIEW AS A TOOL

Another tool used in the present research work for gathering the required data was the interview. Parents and teachers were interviewed regarding the social behaviour of their children and also in those aspects of behaviour where observation was not possible by the investigator.

The interview is a process of communication or interaction in which the subject or interviewee gives the needed information verbally in a face-to-face situation. It is in a sense an oral questionnaire. Instead of writing the response, the interviewee supplies the needed information orally. As a data-gathering device the interview is often superior to other devices because people are usually more willing to talk than to write. The interview is particularly appropriate when dealing with children, illiterates, those with language difficulties and also with those whose intelligence is limited.

In the present study most of the parents were illiterate or semi-literate. They could not fill in the observation schedule. The investigator had to hold interviews with them from time to time and bring out the desired responses regarding the social development of their children. Before the actual commencement of the study, the investigator clearly and frankly explained to the teachers and parents about the nature and procedure involved in the investigation. It was
necessary for the investigator to secure the confidence and co-operation of the interviewees and dispel any doubts of hostility or suspicion and in this it paid to be extra careful.

RECORDING OF THE INTERVIEW

Recording of the interview is as important as preparing for the interview or conducting of the interview. The interviewer can make use of a schedule, a structured format, rating scale or a tape recorder to record the responses of the interviewees. The use of a tape recorder not only eliminates the omissions, distortions, and other modifications of data usually found in written interviews but it also provides an objective basis for evaluating the data in relation to the performance of the interviewer. The use of tape recorder also permits the interviewer to devote full attention to the interviewee and save much time which he may have to utilize in recording the responses during or after the interview. If a tape recorder is not available, the interviewer may take notes of the responses. The notes should include unusual and significant behaviour as well as the responses to questions of the interviewees.

In this study the investigator made use of a tape recorder as well as a structured rating scale to record the responses of the parents so far as the social development of

their children were concerned. On the basis of their responses, specific behaviour patterns could be attributed to the children under study.

VALIDITY AND RELIABILITY OF THE INTERVIEW

The key to effective interviewing is the extent to which the interviewer can establish rapport. Validity is achieved to a greater degree when the interview is based upon a carefully designed structure, to ensure that the significant information is elicited. Reliability, may be evaluated by restating a question in a slightly different form at a later time in the interview. The use of more than one interviewer may also contribute to greater reliability.

According to Good the reliability of the data obtained through the interview is affected by the following factors:

a. The desire of many interviewees to make a good impression, particularly in answers to questions relating to generally accepted standards of behaviour.

b. The reluctance of many subjects to reveal highly personal information that might appear damaging to the interviewee.

c. An attitude of confidence in and respect for the

interviewer, on the part of the interviewee.

d. Content and form of questions, procedures established for the interview, physical setting, mode of recording, accidental distractions and temporary state of the parties involved in the interview.

In the hands of a skilful interviewer a depth of response is possible - a penetration quite unlikely to be achieved through any other means. The interview, however, has certain limitations. It is a time consuming technique. The effectiveness of the interview depends greatly upon the skill of the interviewer not ordinarily possessed by inexperienced researchers. There is a constant danger of subjectivity on the part of the interviewer. The interview is most difficult to employ successfully, for even in the presence of skilled interviewer some interviewees will not respond freely, frankly and accurately.