The purpose of this chapter is to discuss the entire scheme of work of the present investigation. The whole scheme of work is prepared to attain the objectives discussed in the first chapter.

METHODS OF RESEARCH

The decision about the method or methods to be used depends upon the nature of the problem selected and the kind of data necessary for its solution. In the present study the investigator wanted to study the problem intensively as well as extensively. Hence it was necessary that more than one method were utilised.

In the present study one objective is to know the proportion of illiterate adults in adult education classes and proportion of dropouts from adult education classes of Sanand Taluka. To collect all these data the survey method was found to be the most suitable.
Case study method was used but not as is done in clinical psychology. The use was limited merely as a tool to gather information from the adults. A depth study of dropouts and non-dropouts was necessary to ascertain the reasons for dropping out. Data obtained by using the interview and an attitude scale were organised into a brief case history for each individual separately.

When the use of the experimental method is not feasible, causal comparative method is often used to find out the causes of certain occurrences or non-occurrences. It was used in the present study to compare the two groups of adults, dropouts and non-dropouts, to study why they dropped out or continued.

**SAMPLING**

In the present research random sampling or stratified sampling could have been used. These methods of sampling are more scientific than the cluster sampling method. However, the investigator selected the cluster sampling method, because that enabled her to take some special advantages in connection with the nature of research data.

The use of a more scientific method, namely one of the random methods, would have required the investigator to select
classes and cases from among those spread all over the entire state. But since the present study was intended to be intensive, covering such a vast geographical area would have required a lot of time and effort. This was neither feasible nor desirable. Even after putting in such a lot of effort, there was a possibility of special types of classes being included in the study in spite of randomization.

The geographical compactness of the sample was also expected to have an advantageous impact on the quality of the data. She could divert all available time and effort to making this a real depth study.

A depth study also needs an adequate familiarity with the environment. This can be really obtained if the area is geographically limited. So it was thought that the intensiveness of the study and the validity of the data would be adversely affected if the sample chosen was spread all over Gujarat. Under the circumstances it appeared that cluster sampling could be used with advantage.

The next problem was to select a cluster and draw the required sample. The state of Gujarat, like most other States in the country is geographically and administratively divided into 19 units known as districts. Each district is further
divided into Talukas, which are smaller units. These units are more or less similar in culture which in the present context may be defined in terms of the amount of illiteracy, agricultural and other vocations, social climate and values and amenities available.

Selecting one of the districts as a cluster would not have been geographically unmanageable. But in view of the sample size, the study of the entire district could not have been taken up and it would have necessitated the use of one of the random methods for drawing the required sample from the district. The basic principle underlying cluster sampling requires that the cluster chosen be studied entirely. This was possible if a Taluka was chosen as a cluster. There was no harm in doing this for as mentioned earlier the units known as Talukas were more or less similar.

Having decided to take a Taluka as a cluster, Ahmedabad District was chosen from the 19 districts of the State partly on the basis of convenience. This district is divided into seven Talukas. One of these seven, namely Sanand Taluka was chosen as a cluster in view of the co-operation expected. Figure-1 shows the map of Gujarat divided into 19 districts and the location of Sanand Taluka in Ahmedabad District.
STUDY OF THE RECORDS

In the present study it was necessary to check all the registers of adult education classes during the two year period - 1979 and 1980 - to know the proportion of dropouts and non-dropouts in adult education classes of Sanand Taluka.

The classes in Sanand Taluka were spread all over but the administration and organization was done by a social institution, known as Bhagini Samaj, situated at Sanand, the chief taluka town.

The investigator looked through the types of records maintained by this central office and found that the class registers which contained information mentioned below would serve her purpose of estimating the proportion of dropouts.

The information was about —

Name of the class-conductor; village and taluka, venue of the class, date of the commencement of the class, timings, adult's name, age and daily attendance, etc.

This study was undertaken in November, 1979. The NAEP was implemented from October, 1978. The investigator wanted to study the data of more than one year so that she could check the repetition or otherwise of the phenomenon. However, the NAEP was terminated in June, 1980 and so she had to make do
with data of two years only in stead of three, as originally
planned. Even these two years could be available as the pro-
gramme in Sanand Taluka was initiated earlier than the official
implementation of the NAEP.

These data were used for various estimates of dropouts
such as overall, class, sex and agewise which are analysed
and discussed here in Chapter-IV.

COLLECTION OF DATA

The validity of any research mainly depends on how sci-
entifically the data are collected. The data provide the raw
material but that is the source of ultimate findings. One has
therefore to consider carefully at the very outset suitable
procedure for the collection of data. In the present study the
following three tools were used:

1. Checklist
2. Attitude Scale
3. Interview

Check list

In the present study the check list is used to find out,
from the view points of classconductors and supervisors the
reasons why the illiterate adults leave the ABC or continue in
it till the end.
To know the causes of dropouts and non-dropouts, interview technique could have been used instead of check list. But to take the interviews of more than three hundred class conductors was very difficult and was not necessary too. A questionnaire is of course, a handy tool to use with large samples. However, in the present case the simpler form namely, the check list was found to be more convenient. If a questionnaire had to be used, she would have to frame a question on each cause and provide responses of the type found in a rating scale. This would have helped her to estimate the intensity of a cause or frequency of its occurrence. But she thought that the class conductors were not sophisticated enough to analyse their experiences and use their discretion in responding. Hence the obtained estimates would have been erroneous. Under the circumstances, it was wise to use a check list which helps to find out the presence or absence of an attribute and is easy to administer and analyse.

**Development of Check list**

Construction and administration of the check list requires a good deal of pre-planning and pre-thinking.

The first step in constructing a check list is the collection of a number of statements about a subject. For the maximum collection of items the following two devices were used:
1 Interview
2 Study of relevant literature

1 Interview: A group of ten each, dropouts and non-dropouts, ten class-conductors, five supervisors and three project officers of Ahmedabad district were interviewed on different dates.

During the interview some informal questions of the following type were asked to dropouts and non-dropouts.

1 Why did you leave the adult education class?
2 What in your opinion are the reasons for leaving the class?
3 What factors do you think are responsible for helping you to continue in the adult education class?
4 Why did you wish to learn?

The responses to the questions were noted down. From the responses the investigator tried to collect statements regarding the causes of continuing in or dropping out of the classes.

The following pin-pointed questions were asked to the class-conductors, supervisors and three project officers to elicit their ideas precisely.

1 What factors do you think make the adults leave the classes?
2 What factors do you think make the adults continue in the classes?
Ten persons out of the group of 18 that included class-conductors, supervisors and project officers, responded richly with considerable care and understanding. The answers given by all were noted down and closely studied with a view to finding out the causes in the light of their experiences.

Thus the interviews helped her to frame quite an appreciable number of statements that expressed causes for dropping out or continuing in. The list of these two types of causes were separately prepared.

2 Study of relevant literature: Literature of the type mentioned below was thought relevant and referred to —

1 Researches in the subject
2 The Indian Journal of Adult Education
3 The Encyclopedia of education
4 Books on Educational Psychology
5 Books on Motivation

This study helped to enrich further the aforesaid lists of causes.

Classifying the statements

The investigator reviewed each statement to study its content to avoid duplication and to facilitate its appropriate classification into the following categories:
1 class facilities,
2 class conductors,
3 teaching methods,
4 knowledge,
5 motivation,
6 social, economic and vocational background.

After the editing, it was found that there were 36 statements in the list containing causes for continuing in and 35 in the one for dropping out. In each list the statements were arranged in such a way so that all the ones falling into one category appeared consecutively.

Both the check lists were given for a tryout to 5 supervisors, 5 class-conductors and 2 project officers.

After some modifications regarding the language, the final forms of the check lists for the class-conductors, supervisors and project officer were prepared. While doing so, a forwarding letter explaining the purpose of the check lists and the method of responding was also prepared (Appendix-A).

Use of the check list in the present study

The final form of the check lists were administered separately to the class conductors, supervisors and project officer. For the administration of the check lists, the following
procedures were adopted.

1 Some check lists were distributed to the class-conductors by supervisors and project officer.

2 The investigator herself personally distributed the check lists to all the supervisors, project officer and some class-conductors.

The intention on the part of the investigator was to include all the class-conductors, supervisors and project officer. She could do that in case of the last two and accordingly got responses from all the six supervisors as well as one project officer. However, out of a total of 279 class-conductors in the Taluka, she could distribute the check lists only to 200 as the remaining 79 had migrated elsewhere. Even out of the 200 who could be reached only 150 returned the check lists duly filled in in spite of repeated requests.

**Attitude Scale**

In the present study an attitude scale is used to know the attitudes of dropouts and non-dropouts towards learning. This was found necessary because one's attitude to learn helps one considerably to fight against difficulties and pursue studies. Thus lack of proper attitude was guessed as one of the causes for dropping out of the adult education classes since a
highly positive attitude was likely to provide sufficient motivation.

In view of the population, namely the illiterate and meagrely literate adults, it was impossible to use Likert's method. So Thurstone's method was used. Besides, there were some statistical advantages also. The interpretation of an attitude score on an equal appearing intervals scale can be made independently of the entire distribution of the scores for a particular group of subjects.

Ferguson' (1939) who studied the various techniques, finally concluded that the equal appearing interval method was superior, in consideration of economy and accuracy. In the method of equal appearing intervals, the scale values are not affected by the inclusion or exclusion of other items.

Procedure for construction

Thurstone's equal appearing intervals technique proceeds with the following steps to construct an attitude scale.

a: Collection of the statements
b: Selection of the group of judges
c: Rating of the statements
d: Final selection of the statements
(a) **Collection of the Statements:** With a view to attaining perfection in the task, all the sources of item universe were explored. A group of 20 persons including the class-conductors, supervisors, illiterate adults and resource persons in adult education were interviewed. Their responses were noted down. From these responses the investigator tried to collect statements regarding attitude towards learning.

Reference books, news-papers, magazines and other relevant literature was referred to collect the statements for the attitude scale.

The statements thus collected were scrutinized to avoid duplication and then were refined and reframed keeping in view the criteria laid down by psychometricians for the construction of attitude statements.

(b) **Selection of the judges:** Judges were required for the rating of the 45 statements (Appendix- B ) selected. In the present study 54 judges were selected for rating the statements. Since 50 is empirically proved to be a sufficient number. For selecting the judges, the following criteria were kept in mind:

1) Specially qualified for teaching
2) Experience in the field of social education
3) Sophistication in the development of psychometric scales.
A person having any one of the above was considered suitable provided he/she showed willingness to do the work with interest. Eighteen of the 50 judges were teacher educators of whom nine were closely connected with the State Resource Centre at Gujarat Vidyapeeth, Ahmedabad. Four of the judges were on the staff of the State Guidance Bureau and four were teachers at the secondary level. Among the remaining 24 who could all be classified as adult education personnel, three were project officers, seventeen were supervisors and two were adult education workers, one being a school principal and the other a social worker who managed the show in the Sanand Taluka, the area of study.

(c) Ratings of the Statements: All the 45 statements were typed and cyclostyled with necessary arrangement for rating and with a request to co-operate and instructions required for the judges. (Appendix- B )

The clarification for each of the eleven points to be used for rating was given as under:

11 Completely agree
10 Agree
9 Mostly agree
8 Almost agree
7 Partially agree
6 Neutral
5 Partially disagree
4 Almost disagree
3 Mostly disagree
2 Disagree
1 Completely disagree
It can be seen that categories 1 and 11 represent respectively the most unfavourable and the most favourable attitude expressed by the statement.

The judges were asked to indicate their evaluation of the attitude expressed by the statement by encircling the appropriate rank given against the statement. Their attention was specially drawn to the fact that they had to evaluate the statement only and not express their attitude.

During the editorial process, the ratings done by all the 54 judges were scrutinized separately for each statement with a view to finding out whether the evaluation was done properly. In spite of clear instructions, four judges were found to be occasionally absent minded, indicating probably their attitude rather than evaluating the statement. This was detected by their ratings of the negative statements as positive and vice versa e.g. statement no.42 'Different weights and measures (gram, kilogram, metre, liter) can be recognized through the knowledge of Arithmetic' which obviously shows a positive attitude was rated as negative. The judgements given by those four were cancelled.

The ratings by all the acceptable fifty judges for each statement separately were recorded so that the frequency with
which the statement was placed in each of the 11 categories was obtained.

The median of the distribution of judgements for each statement was taken as a scale value of the statement.

The interquartile range or 'Q' was used as a measure of the variation of the distribution of judgements for a given statement. When all the judges are in good agreement in placing the statements according to their proper categories, the 'Q' values would be small. High 'Q' values, indicate ambiguity of the statement.

(d) Final selection of the statements: For constructing an attitude scale according to Thurstone's method the usual custom is to select about 20 to 22 statements. But this is to be done on the basis of the scale and 'Q' values obtained from the rating of the judges.

The total of 45 statements (Appendix- B) rated by the judges were arranged as per their scale values in descending order. (Appendix- C). It can be seen that the highest scale value is 10.48 and the lowest 1.58. The 'Q' values are noted next to the scale values. The last column indicates the serial number of the selected statement in the final form of the scale.
It can be seen how the scale values are relatively equally spaced and 'Q' values relatively small in case of the selected statements. It can be noted that the scope for selection at the lower end of scale values was very limited. But it can also be noted that luckily in case of most statements the 'Q' values were small enough to be comparable with the 'Q' values of statements selected with plenty of scope.

FINAL FORM OF THE SCALE

Having selected the statements the next task was to arrange them.

The rule is to arrange the statements in a random order so that those having closer scale values do not come subsequently. The order of the selected statements in the final form as indicated by the serial numbers in the last column (Appendix-C) shows how it was done.

The statements then are generally printed as per the new order for presenting them to the subject whose attitude is to be measured with instructions to indicate those that they are willing to accept or agree with and those that they reject or disagree with.

But in the present study, the scale was to be administered orally during the interviews since the dropouts were completely
illiterate and even most of the non-dropouts also could hardly have managed to read and comprehend it. Hence it was decided to give the instructions orally and then read out to them the statements one by one, getting their response each time after a statement is read. Such oral administration required some arrangement for recording the responses. This was done by preparing a record sheet (Appendix-\( \text{a} \)).

The attitude score is taken as the arithmetic mean of the scale values of the statements agreed with.

The scale developed was thus ready for being used in data collection for the present study after checking its reliability and validity.

**Reliability and Validity of the Scale**

The only method that could possibly be used for estimating the reliability of the scale was the split-half one. On a homogeneous group of 50 dropouts, the estimate of reliability obtained was .78 (Appendix-\( \text{c} \)). This can be termed as quite satisfactory in view of the fact that the median reliability coefficient on attitude scales has been about .70 (Freeman, 1976, p.604).
Validity: The estimates of the validity of the present scale was checked by using two criteria contrasted groups and ratings - from among those mentioned by Anastasi (1976, p.454). But this may be said to have been done posthumously since the data collected for the present investigation was used.

1) Contrasted Groups: Groups generally known to represent distinctly different points of view are used for validating attitude scales. In the present case dropouts and non-dropouts among adult education were taken as contrasted groups, because a relation between what a person says and what he does can be regarded as an evidence of validity. Accordingly, the non-dropouts would be more favourably inclined to learning compared to the dropouts.

During the study the scale was administered to 316 dropouts and 109 non-dropouts. The scores of these two entire samples were compared. Besides, the scores of a matched groups of 50 dropouts and non-dropouts, matched on six variables, were also compared.

The following observations from data in Table-7 are more than enough to stand testimony to the validity of the scale.

The lower score range among the non-dropouts in both the samples is higher than the lower score range among the dropouts.
The mean scores of the non-dropouts is higher and the difference between the mean scores of the two contrasted groups in both the samples is highly significant.

The above phenomenon is found to persist in separate studies of various age, occupation and caste groups among both the samples.

2) Ratings: Since the interviews were only partially structured and were personally conducted by the investigator herself it was possible for her to rate the adult's attitude to learning as reflected in the conversation before actually administering the attitude scale, so that her rating was not biased by the adult's responses to the items of the attitude scale, though it must be admitted that bias arising out of her knowledge regarding the individual being a dropout or a non-dropout could not be avoided. The rating was done on a five-point scale, the points being defined as (1) Most favourable, (2) Favourable, (3) Indifferent, (4) Unfavourable, (5) Most unfavourable and the rating noted in the record sheet specially prepared for recording the scale responses.

Ratings obtained on a sample of the 50 dropouts and 50 non-dropouts in the matched groups were correlated with the scores on the scale by calculating the coefficient of contingency. (Appendix-Co).
It can be seen that the corrected value of 'C' is 0.698 and judged by this criterion, the scale can be said to be sufficiently valid.

Thus, the reliability of the scale was checked before putting it to use whereas its validity was established through its use in the present study.

During the interview the final form of the attitude scale was administered to 316 dropouts and 109 adults who had completed the adult education classes spread over 48 different villages of the Sanand Taluka.

Interview

In the present study the investigator wanted to know the reasons for dropouts and non-dropouts from the viewpoints of illiterate adults. For this depth study, interview was found to be quite suitable as a tool. Besides, it was also found to be essential since a questionnaire could not have been used with the illiterate adults.

Type of Interview selected

Having decided to use interview as a tool for getting the case history data from the adults, the problem was to find out whether structuring was necessary. The main thing that the
investigator was interested in knowing: 'Why the ease dropped out from the class' or 'Continued in the class'. For this one of the following questions would have been enough.

1) Why did you desert the AEC?

or

2) Why did you continue in the AEC?

But during the pilot conducted to gain experience, it was found that the adults were not sufficiently vocal. This might have been due to several reasons such as lack of familiarity with the researcher, absence of desire and ability to remember and think, a feeling of diffidence, not enough sophistication in using the language and perhaps also a psychological defensiveness leading the interviewer to protect himself, though unconsciously, from being responsible for the dropping. Consequently the question asked elicited only some superficial information. Most of them said that they continued or discontinued because they had or did not have interest. So it was felt that some structuring would have to be done. Besides, to understand the causes properly the data regarding the adult's environment were also necessary. The general procedure used for conducting the interview is outlined.

The interviewee was mostly approached through the class conductor who introduced the researcher. She then asked general
information with a view to getting it and also establishing initial rapport. The information included points such as age, caste, occupation, whether married, number of children, members in the family, literacy in the family, etc. The information was noted down. She then used to ask one of the two questions seeking reasons. The adults usually replied very briefly but she used to further continue the conversation by asking questions and raising points in view of the adult's background and the causes given. This was done till the investigator was satisfied that she had been able to know all the possible causes and understand them properly. In fact, once the initial inhibition was broken, it was not at all difficult to make the adult talk. Hence, one can say that the interview used was only very partially structured. The causes obtained were noted briefly.

Conducting the Interviews

The interviews were conducted during the period September 1980 to March 1981. There were a total of 605 dropouts spread over 48 villages during the two years under study. The intention was to interview as many of them as available and this was to interview as many of them as available and this was to be done personally by the investigator herself. She moved from village to village with a list of dropouts and tried to locate them with the help of the class-conductor and in case he/she had migrated
through some benevolent helpful persons in the village. Certain villages had to be visited more than once. This required a lot of time, preservation as well as patience. One had to get used to the hardships in a village such as walking long distances, dusty roads, water pools, fields etc. After all possible efforts were made, 316 out of 605 dropouts could be contacted. The others had migrated elsewhere mainly on account of job or marriage. Some of them were dead.

Since the use of the causal comparative method was to be made it was necessary to interview some non-dropouts also. In view of the matching and availability, 109 of them could be interviewed.

The attitude scale developed for measuring the adult's attitude to learning was also administered orally during the interview since even those who had not dropped out did not possess the ability to read it and comprehend.

On the whole the experience of interviewing was satisfying and gratifying because the adults and the class-conductors extended the maximum possible cooperation. On her part, the researcher was also punctual and accommodating. In trying to find out the causes, the researcher tried to be objective and non-judgemental as far as it was humanly possible.
The data required for the study were thus collected through using various approaches discussed in the present chapter. The analysis and interpretation of the data obtained are presented in the three subsequent chapters.