



DIPLOMA IN RURAL DEVELOPMENT

DRD-01

Rural Society

Block

5

SOCIAL RESEARCH IN RURAL SECTOR

Unit – 1

Types of Data and Techniques of Data Collection

Unit – 2

Different Types of Sampling

Unit – 3

**Tools of Data Collection – Observation, Questionnaire, Schedule,
Interview, Case – study**

Unit – 1

Types of Data and Techniques of Data Collection

Learning Objectives:

After completion of this unit, you should be able to:

- *know about the types of data*
- *distinguish between Census and Sampling*
- *describe the importance of Sampling in research activity.*

Structure:

- 1.1. Introduction
- 1.2. Meaning of Research
- 1.3. Objective of Research
- 1.4. Types of Data
 - 1.4.1. Primary Data
 - 1.4.2. Secondary Data
- 1.5. Techniques of data collection
 - 1.5.1. Census Method
 - 1.5.2. Sampling Method
- 1.6. Objectives of Sampling
- 1.7. Importance of Sampling in Social Research
- 1.8. Advantages of Sampling Method
- 1.9. Disadvantages of Sampling Method
- 1.10. Let Us Sum Up
- 1.11. Key Words
- 1.12. References

1.1. Introduction:

Rural Sociology is a branch of Sociology and therefore, the study of rural society makes an unrestricted use of all the methods of social research. Values and facts are found mixed in rural society. Therefore, it is by no means easy to discover any cause-effect relationship among them by using the scientific method. In spite of the difficulties in the scientific study of rural society, rural sociology, which studies it, is believed to be a science which makes use of statistical and social survey methods and also of the other scientific methods. Though it is true that scientific method cannot be applied to the study of the rural society as it can be to the natural sciences, there is no reason why the study of the rural society should not be done

according to a method recognized by science if such a method can, with facility, be used in social sciences like Psychology, Sociology, Economics Political Science, etc.

Let us now acquaint you with the different types of data, and with the different tools and techniques of data collection and their strengths and weaknesses. But before that a brief discussion about the meaning of research will be helpful.

1.2. Meaning of Research:

Research is composed of two words -'re' and 'search', which means to search again, or to search for new facts or to modify older ones in any branch of knowledge. Research means search for knowledge. Research is a scientific and systematic search for pertinent information on a specific topic. It is an art of scientific investigation. The Advanced Lerner's Dictionary of Current English defines research as 'a careful investigation for inquiry especially through search for new facts in any branch of knowledge'. Research is defined as a careful or critical enquiry or examination in seeking facts or principles; diligent investigation in order to ascertain something (Webster's New International Dictionary).

Some people consider research as a movement, movement from the known to the unknown. It is actually a voyage of discovery. The search for knowledge through objective and systematic method of finding solution to a problem is research. The systematic approach concerning generalization and the formulation of a theory is also research. Research is an academic activity and as such the term should be used in a technical sense. Research refers to the systematic method consisting of enunciating the problem, formulating a hypothesis, collecting the facts or data, analyzing the facts and researching certain conclusions either in the form of solutions towards the concerned problem or in certain generalization for some theoretical formulation.

1.3. Objective of Research:

The main objective of research is to find out the truth which is hidden and which has not been discovered as yet.

- (i) To gain familiarity with a phenomenon or to achieve new insights into it. It is known as Exploratory or Formulation Research Study.
- (ii) To portray accurately the characteristics of a particular individuals, situation or a group. Such studies are known as Descriptive Research.
- (iii) To determine the frequency with which something occurs or with which is associated with something else. Such studies are known as Diagnostic Research.
- (iv) To test a hypothesis of a causal relationship between variables. Studies with this object are known as Hypothesis Testing Research.
- (v) The research is to conceptualize the terms used in any investigation and to define and explain them.

- (vi) Research has its special significance in solving various operational and planning problems of industry and business.
 - (vii) It helps to build on the existing knowledge around the global environment.
 - (viii) It inculcates scientific and inductive thinking and it promotes development of logical habits of thinking and organization.
 - (ix) It helps to put the findings into the context of the national guidelines.
 - (x) Its aim is to make an original contribution to the existing stock of knowledge and promoting its advancement. It may mean generalization of new theories.
 - (xi) Research facilitates the decisions of the policy maker. Increased amounts of research make progress possible. Hudson says, 'All progress is born of inquiry. Doubt is often better than overconfidence, for it leads to inquiry, and inquiry leads to invention.'
 - (xii) Research inculcates scientific and inductive thinking and it promotes the development of logical habits of thinking and organization. It is an outlet for new ideas and insights.
 - (xiii) Research has gained added importance, both for government and business. The increasingly complex nature of business and government has focused attention on the use of research in solving operational problems and planning problems of business and industry. It promotes the development of new styles and creative work.
 - (xiv) Research means a source of livelihood, careerism or a way to attain a high position in the social structure.
 - (xv) It explores the various perceptions of the given field of Work.
- Social research begins with the selection and formulation of the research problem and ends by drawing some conclusions about the research finding. In between there are a number of other stages involved in research: preparation of research design, data collection, data processing and data analysis.

1.4. Types of Data:

In dealing with any real life problem it is often found that data at hand are inadequate, and hence, it becomes necessary to collect data which are appropriate. Data required for social research can be made available from primary sources and secondary sources.

1.4.1. Primary Data:

Primary data are those data that are collected for the specific problem. It is collected as fresh and for the first time. On every occasion, the primary data are collected; new data are added to the existing store of social knowledge. There are several methods of collecting primary data: Interview, Observation, Case study, Schedule, Questionnaire.

1.4.2. Secondary data:

Secondary data are those data which have already been collected by someone else and already been passed through the statistical process. Any type of primary data can serve as secondary data. When the researcher utilizes secondary data, then he has to look into various sources from where he can obtain them. Secondary data may either be published data or unpublished data: official records, reports, books, articles, journals etc.

1.5. Techniques of data collection:

1.5.1. Census Method:

It is very rarely used, especially in case of social phenomena. The most important and large scale census type survey is probably the census of population that is undertaken after regular intervals in every country. In India too census of population is conducted every tenth year. This is the biggest comprehensive study undertaken by the government. In the census of 1951, for example, nearly 7 lakh persons consisting of 6 lakh enumerators and one lakh other supervisory staff, personally visited 644 lakh houses and collected information about 36 crore citizens of the country. Nearly 15 crore rupees were spent on this gigantic venture. These figures were much higher in 2001.

1.5.1.1. Advantages of Census Method:

This method is free from sampling errors. There is no chance for personal bias. Highest accuracy is obtained under census method. All the characteristics of the universe is maintained in original.

1.5.1.2. Disadvantages of Census Method:

It involves a great deal of time, money and energy. This method is useless in case results are urgently required. There is possibility for creeping in of statistical errors. A complete enumeration or estimation of all the items in the 'population' may not be necessary.

1.5.1.3. Unsuitability of Census Method:

The very colossal nature method makes it prohibitive to undertake such study. The time, money, and men required for the purpose are very, large, that is it does not seem a practical proposition to undertake such a study, unless it is absolutely essential. Census method, besides the difficulties of time, men and money may create other problems also. It may not be possible at times to know the names of all those concerned, for example, readers of a particular newspaper or users of a particular article. All the person even if known may not be available for contact. They may refuse to

meet or their addresses may not be known. Exhaustive and intensive study is also rendered impossible because of the large number. Above all, the sampling enquiry gives significantly correct results with much less time, money, and material. Because of these factors sampling method has received much popularity in surveys and investigations.

1.5.2 Sampling Method:

When a small group is taken as the representative of the whole, the study is called sampling study. The whole group from which the sample has been drawn is technically known as universe or population and the group actually selected for study is known as sample. Sampling is simply the process of learning about population on the basis of a sample drawn from it. Thus, universe and population have to be taken in connection with sampling in entirely different context. According to Prof. Calvin F. Schmid - "a statistical population or universe may consist of attributes, qualities or behaviour of people, the behaviour of inanimate objects such as dice or cities or city blocks, households or dwelling structures, the days output of a factory or opinions or the electorate of an entire nation". "A statistical sample is a miniature picture or cross-section of the entire group or aggregate from which the sample is taken" (P.V. Young).

1.6. Objectives of Sampling:

The primary objective of the sample survey is to obtain accurate and reliable information about the universe with minimum cost, time and energy and to set out the limits of accuracy of such estimates.

The choice of a sample as representative of the whole group is based upon certain assumptions:

- **Underlying homogeneity amidst complexity:** Although things especially social phenomena, appear to be very complex in nature, so that no two things appear alike, a keener study has disclosed that beneath this apparent diversity, there is underlying fundamental unity. Apparently ever student may appear to be different. There is difference of health, body, habits, personality etc. but fundamentally they are similar in many respects, so that a study of some of them will throw significant light upon the whole group. It is the possibility of such representative types in the whole population that makes sampling possible. If no student were alike in any respects the sampling would have been impossible.
- **Possibility of representative selection:** The second assumption is that it is possible to draw a representative sample. It has been proved that if a certain number of units are selected from amass on purely random basis, every unit will have chance of being included and the sample so selected will contain all types of units, so that it may be representative of the whole group. This principle is popularly known as Law of Statistical Regularity and is the very basis of all sampling enquiries.

- **Absolute accuracy not essential:** The third basic factor is the fact that absolute accuracy is not essential in case of mass study. In large scale studies we have to depend upon averages which are considered fairly significant in any type of enquiry. Thus, for example, if the average income of a group of a person is Rs. 257 per month. But the sample study discloses it to be 256 or 253. The generalization would not be significantly affected. What material differences does it make whether the income is 256 or 257. Thus, it is not the absolute accuracy but relative or significant accuracy that is needed in case of large scale observation, and the results of sampling studies although not hundred percent accurate are nevertheless sufficiently accurate to permit valid generalizations.

1.7. Importance of Sampling in Social Research:

Sampling studies are becoming more and more popular in all types of mass studies, but they are especially important in case of social surveys. The vastness of the population, the difficulties of contacting people, high refusal rate, difficulties of ascertaining the universe make sampling the best alternative in case of social studies. The census method is rarely, if ever tried in matters of social research. Recent developments in sampling technique have made this method more reliable and valid. The results of sampling have attained a sufficiently high standard of accuracy. In social research, a close study of the people has to be made, generally taking to sufficiently long period in studying each unit. Under such circumstances sampling is most suitable to be resolved from such situation.

1.8. Advantages of Sampling:

Sampling method has certain definite advantage over census method. Chief of these advantages are as follows.

- **Saving of time:** Comparatively smaller numbers of units are studied in sampling method and naturally it requires much less time than census method. In certain types of social surveys, time is the most important factor and the result of the study has to be declared quite early to be of any use at all. In all such survey sampling is the only method which can be used.
- **Saving of money:** Survey of smaller number of cases not only requires less time, but also requires less money and the study can be financed with much less resources.
- **Detailed study:** When the number of units is large, detailed study is not possible. The smaller number of cases in the sample permits a more minute observation and detailed study. In social research, sometimes, a thorough and prolonged study has to be undertaken. This is only possible when the number of cases to be studied is small.

- **Accuracy of result:** All the above advantages of sampling are not at the cost of accuracy. On the other hand at times the result drawn by sampling techniques are more reliable than the results from census method. If the sample has been properly selected the results are within a very close range of accuracy. 'Fortune' Magazine of America once made a sample study of 4500 persons to assess the chances in the presidential election. The votes predicted for both the candidates were within 1% error. This shows that if proper sample is selected the standard of accuracy achieved is sufficiently high. Techniques have been successfully evolved to calculate the sampling error by means of statistical methods.
- **Administrative convenience:** A small sample is usually more convenient from administrative point of view. In social search we have to deal with human beings who cannot be made to work according to our own will. A small sample is, therefore, more manageable especially in social research.
- **Impossibility of the use of census method:** In social research the use of census method, sometimes, becomes impossible. It is because the universe is too vast and geographical area is scattered. So that every unit cannot be contacted. Sometimes, the universe is not properly defined as in the case of opinion surveys for a particular product in such a case, it is impossible to know all users of the product and the only method that can be used is the sample method.

1.9. Disadvantages of Sampling Method:

The main disadvantages of sampling method are as follows:

- **Chances of bias:** The most common argument against the sampling method is the fact that it may lead to biased selection and thereby leads us to draw false generalizations. A bias in the sample may be caused either by faulty method of sampling or the nature of the phenomena itself.
- **Difficulties of a representative sample:** The results of sampling are accurate and usable only when the sample is representative of the whole group. Selection of a completely representative sample is very difficult particularly when the phenomena under the study are of a complex nature as in case of social research.
- **Need for specialized knowledge:** The use of sampling method cannot be made by everybody and anybody. It requires a specialized knowledge in sampling technique, Statistical analysis, and calculation of probable error. In the absence of such knowledge the researcher may commit untold blunders and entire findings may be reduced to useless scrap.

- **Difficulties in sticking to sample:** Although the number of units in the sample is small it is not always easy to stick to it especially in case of social research. The cases of samples may be widely dispersed. Some of them may refuse to co-operate with the researcher, other may be inaccessible, e.g., peregrination ladies. Because of these difficulties complete cases can never be taken up. Sometimes, they have to be replaced by other cases. All these cause a bias in these studies.

- **Impossibilities of sampling:** Sometimes, the universe is too small or too heterogeneous so that is impossible to draw a representative sample. In such case census study is the only alternative. In those cases too, where a very high standard of accuracy has to be maintained the sampling method is unsuitable, because even in the most accurate method of sampling, there are always some chances of error.

Check Your Progress I

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

1) How many types of data are there?

Ans.

2) What are the objectives of Sampling?

Ans.

1.10. Let Us Sum Up:

This unit describes about social research which is a scientific approach to the study and understanding of the social problems. It studies the society from purely a scientific angle and attempts an impartial analysis of social problems. It also enables predictions on the basis of data collected during the process of social research. Data is collected through primary or secondary sources depending on the research design.

Most social science research is based on the study of some and not all the units. This is called a sample study. When each and every unit of the total population is covered it is called a census survey. We have given you a general idea of sampling and its objective, importance, advantages and disadvantages.

1.11. Key Words:

- **Sample:** A portion of the total number of units(referred to as universe)
- **Census:** Each and every unit of the total population (universe for the study) covered
- **Variable:** Characteristics of units of analysis that vary i.e., they take on different values or attributes for different observations.
- **Primary data:** Data obtained directly from the original source through a specific investigation rather than from a published source. Social science research depends heavily on primary data collected through observation, schedules, interviews, etc.
- **Secondary data:** Data which are at least one stage away from the original source and are normally available in some processed and structured form. Examples of secondary data are official statistics, census reports, statistical abstracts, etc.

1.12.References:

1. Goode, W.J. and Hatt, P.K. (1952) *Methods in Social Research*, McGraw Hill, London
2. Jahoda, M., Merton D. and Stuart, W.C.(1951) *Research Methods in Social Relations*, Dryden, New York

Unit – 2

Different Types of Sampling

Learning Objectives:

After completion of this unit, you should be able to:

- get acquainted with different types of Sampling
- differentiate between probability sampling and non probability sampling
- understand how to use Sampling in social research

Structure:

- 2.1. Introduction
- 2.2. Types of Sampling
- 2.3. Probability Sampling
- 2.4. Non-probability Sampling or Judgement Sampling
- 2.5. Random Sampling
- 2.6. Purposive Sampling / Deliberate Sampling / Judgement Sampling
- 2.7. Stratified Sampling
- 2.8. Quota Sampling
- 2.9. Multi – stage Sampling
- 2.10. Convenience Sampling
- 2.11. Self – selected Sample
- 2.12. Cluster Sampling
- 2.13. Systematic Sampling
- 2.14. Other Sampling Methods
 - 2.14.1. Snow ball Sampling
 - 2.14.2. Spatial Sampling
 - 2.14.3. Saturation Sampling
- 2.15. How to select a Sample
- 2.16. Source List
- 2.17. Size of Sample
- 2.18. Use of Sampling in Social Research
- 2.19. Let Us Sum Up
- 2.20. Key Words
- 2.21. References

2.1. Introduction:

Sampling is the process of selecting units (e.g. people, organizations) from a population of interest so that by studying the sample we can fairly generalize our results back to the population from which they were chosen. Let us understand that some types of sampling rely upon quantitative models, so we should distinguish between probability sampling methods and non probability sampling methods.

2.2. Types of Sampling:

Broadly, there are two types of sampling i.e. Probability Sampling and Non Probable Samples. In Probability Sampling, we can have Random sample, Stratified sample, Cluster, Systematic sampling, etc. But, in non probable samples, we can have convenience sampling, quota sampling, purposive sampling, etc

The best sampling is probability sampling, because it increases the likelihood of obtaining samples that are representative of the population.

2.3. Probability sampling:

It provides a scientific technique of drawing samples from population according to some laws of chance in which each unit has some definite pre-assigned probability of being chosen in the sample. Random sampling, systematic sampling, stratified sampling, cluster sampling, multi-stage sampling and area sampling are considered as probability sampling.

2.4. Non-probability sampling or judgment sampling:

It is based on the personal judgment. Here, a desired number of sample units are selected deliberately or purposely depending upon the object of the enquiry so that only the important items representing the true characteristics of the population are included in the sample. Purposive sampling, quota sample and convenience sampling are considered as non-probability sampling.

A number of methods are used for drawing samples, but they can be grouped into the following heads:

1. Random Sampling
2. Purposive Selection
3. Stratified Sampling
4. Quota Sampling
5. Multi-stage Sampling
6. Convenience Sampling
7. Self-selected Sample
8. Systematic sampling.

2.5. Random Sampling:

Of the methods that yield probability samples, simple random sampling is the simplest and one that is basic to all others. Simple random sampling method ensures each of the N units in the population has equal chance or the same chance of being selected. According to Pattern - "Random sampling is the form applied when the method of selection assures each individual or element in universe an equal chance of being chosen". In the words of W.M. Harper, 'A random sample is a sample selected in such a way that every item in the population has an equal chance of being included.' Random sampling is not the same as chance selection. Some people think, if a sample is selected haphazardly without any choice of selection it is always random. It is however, not always so, although in most cases chance selection may prove to be a random selection too. To take an example suppose a page from some book is to be selected at random and for this purpose the book is opened all of a sudden. Now if the book is old, the pages that have been more frequently read will have a greater chance of opening.

Random sampling has also been called proportionate sampling because each class of item is in the same proportion if the sample is in the universe. A random sample is more suitable, more homogenous and comparatively in large groups. When the universe is composed of different groups of extremely varied sizes this method cannot be successfully used. Usually two methods are used to secure true randomness: (i) lottery method is self-explanatory; and (ii) use of random number tables which are published by several authors of whom mention may be made to L.H.G. Tippett (1927), Fisher and Yates (1938), Kendall and Babington Smith (1939).

2.5.1. Methods of Drawing a Random Sample:

Following four methods are generally used for drawing out a sample on random basis.

i). Lottery method: Under this system, numbers or names of various units of universe are written on small identical slips of paper which are folded and mixed together in a container thoroughly. A blindfold selection is made. The required numbers of chits are drawn from the container.

ii). Tippett's number: The most practical and economical method of selecting a random sample consists in the use of random numbers which have been so constructed that each of the digits 0, 1, ... , 9 appears with approximately the same frequency and independently of each other. One such table of random numbers is constructed by Tippett. L.H.G. Tippett constructed a list of 10400 four digit numbers written at random at every page. They have been constructed out a 41600 digits taken from census reports by combing them in fours. All list of first forty numbers is given below.

Table 6.1: Tippet's Number

2952	6641	3992	9792	7979	5911	3170	5624
4167	9524	545	1396	7203	5356	1300	2693
2370	7483	3408	2762	3563	1089	6913	7691
0560	5246	1112	6107	6008	8126	4433	8776
2754	9143	1405	9025	7002	6111	8816	6446

The method of drawing out the sample from the Tippet's number is very easy. Suppose a sample of 20 people is to be drawn from a list of 6000 persons. For this purpose, first of all we shall number each in it from 0 to 6000. Then we shall open any page of Tippet's numbers and select first twenty numbers that are below 6000. Tippet's numbers are widely used in all the sampling techniques and have been found to be quite reliable as regards accuracy and representativeness.

iii) Selecting from sequential list: Under this plan the names are first arranged according to some particular order which may be alphabetical, geographical or simply serial. Then out of the list every 10th or any other number of case may taken up. A beginning may be made from the middle. Thus, for example, if every tenth from 7th, 17th, 27th, 37th etc. may be selected.

iv) Grid system: It is used for selecting a sample of area. According to this method a map of entire area is prepared. Then screens with squares are placed upon the map and the areas falling within the selected squares are taken as samples.

2.5.2. Precautions in Drawing a Random Sample:

The following precautions should be taken in drawing a random sample:

- (i) The population to be sampled should be clearly defined and a list of all units for the purpose of selection should be ready. Different units should be approximately of equal size. Units should be independent of each other and the selection of anyone may not make it binding to select any other unit, e.g., selection of fathers and their sons.
- (ii) Every unit should be accessible units. Once selected should not be left out or replaced by other units.

2.5.3. Advantages of Random Sampling:

Following are the main advantages of random sampling:

1. It is free from bias and, therefore, not affected by the choice of the researcher.
2. It is generally more representative because each unit has equal chance of being selected.

3. It is very simple. The researcher need not exercise his brain in deciding whether a particular unit can be representative or not.
4. Assessment of sampling error can be made. If the sample has been drawn according to strict random sampling basis, it is possible to calculate the limit of error due to sampling.

2.5.4. Disadvantages of Random Sampling:

Following are the main advantages of random sampling:

1. It is very difficult to have completely catalogued universe and thus selection according to strictly random basis is frequently not possible. In its place what we generally use is the chance selection.

Cases selected may be too widely dispersed or even impossible to contact and thus adherence to the whole sample may not be possible.

If units are not of different size and the universe consists of many heterogeneous groups of different size, random sampling method is unsuitable.

2.6. Purposive Sampling / Deliberate Sampling / Judgment Sampling:

When the researcher deliberately or purposively selects certain units for study from the universe, it is known as purposive selection. In this type of sample selection, the choice of the selection is supreme and nothing is left to chance. According to Adolph Jenson - "a purposive selection denotes the method of selecting a number of groups of units in such a way the selected groups' together yield as nearly as possible the same averages or proportion as the totality with respect of those characteristics which are already a matter of statistical knowledge".

According to the above definition the following are essential features of purposive selection:

1. The aim of purposive selection is to gain as representative a sample as possible. A representative sample is one which possesses entire qualities of the universe in the same proportion. Following are the criteria of representativeness.

(a) Different variables are in the same proportion both in the sample as well as in the universe, e.g., proportion of males and females educated, uneducated etc.

(b) The frequency distribution of the two may be similar.

(c) Combined average of sample unit is the same as average of universe.

(d) Variability of the two: sample and universe - is the same. Excepting the first one all other criteria require statistical analysis.

2. In order to achieve the representativeness the selector must possess a complete idea of the nature of universe and various statistical measurements about it.

3. The selector should try to keep him completely free from any bias. It is better if the samples are selected by more than one person and the common units are taken in selection.

Criticism - According to Parten: "Statisticians as class have nothing to say in favour of purposive selection". Neyman has called this method as hopeless. According to Snedecor there are three main disadvantages of this system:

- (a) The knowledge of the population must be available in absence, which is mostly not possible.
- (b) The controls are often not effective and a biased sample is selected.
- (c) Estimate of sampling error rests upon hypothesis which is seldom met in practice.

In spite of the above criticisms there are some good qualities also. If proper care has been taken in selecting the sample and in keeping out any bias a small sample can be representative of the whole. Thus, purposive selection is at times very cheap. It is more useful specially when some of the units are very important and must be included. Thus, if certain shares are to be selected for constructing sensitive index numbers, random sampling can be resorted to as some of the shares must be included in the list if it is to be at all representative.

2.7. Stratified Sampling:

Stratification means division of the universe into groups according to geographical, sociological or economic characteristics. It is a combination of both random sampling and purposive selection. Under this system the universe is first divided into a number of strata or groups. Then from each group certain numbers of items are taken on random basis. Thus, in the selection of strata we use purposive selection method, but in selecting actual units from each stratum random method is used.

2.7.1. Process of Stratifying:

The source of stratified sampling depends upon formation of strata or groups. If a correct stratification has been made even a smaller number of units will form a representative sample. Following points may be kept in mind while constructing strata:

1. First of all we should note the different variables involved and used in the study of the problem. The common variables used for stratification are generally region, income, sex etc. The universe is first divided into groups and then the required units are selected at random from each group. In selecting the variables, care should be taken to see that they are related to study.
2. The size of each stratum in the universe should be large enough to provide selection of items on random basis. If the strata are too small, difficulty may be created in making a random selection.
3. Stratification should be so conducted that there should be perfect homogeneity in the different units of strata. The items in one stratum should be similar to each other but they should differ significantly from the units of other strata.
4. It is desirable that number of items to be selected from each stratum should be in the same ratio to the total number of units in the stratum the

same ratio. In a certain social group it is 75%, the same percentage of units will be selected from amongst the educated.

5. The strata should be clear cut and free from overlapping, so that every unit must find a place in some stratum or the other and no unit should be placed in more than one stratum. The total number of units in different strata should be equal to total number of units in universe.

2.7.2. Kinds of Stratified Sampling:

Stratified sampling itself is of following three types:

(i) Proportional stratified sample: In method the number of units to be drawn from each stratum is in the same proportion as they stand in the universe. It has already been explained above.

(ii) Disproportional stratified sample: According to this method an equal number of cases are taken from each stratum regardless of the size of strata in proportion in the universe. It is also known as controlled sampling because it permits inter-strata comparison.

(iii) Stratified weighted sampling: This method aims as removing the defects of disproportion sample and combine the advantages of the two stratified samples stated earlier. The disproportion sample has one defect, that it creates bias over weighting some of the strata. In this system equal numbers of units are selected from each stratum. Averages are taken from each stratum but they are given weights in proportion to the size of stratum in the whole universe.

2.7.3. Advantages of Stratified Sampling:

Following are the main advantages of stratified sampling:

1. The sampler gets a greater control over the sample. In random sample although every unit has an equal chance of being selected, sometimes, important groups are left out by chance. Under stratified sampling no significant group is left unrepresented.
2. If proper stratification has been made a representative character can be achieved with fewer items. If a stratum is perfectly homogeneous, selection of even a few items from it is enough.
3. Replacement of case can be resorted too easily if the original case is not accessible to study. If a person refuses to co-operate with the survey, he may be replaced by another man from the same stratum.
4. In stratification, the sample can be so selected that most of the units are geographically localized. In a purely random sample there is not enough control and the cases actually selected may be very widely dispersed. Concentration of units saves time and cost of survey.
5. It is of great help if the distribution of the universe is skewed.
6. It is the only sampling plan which enables us to achieve different degrees of accuracy for different segments of the population.

7. Stratified random sampling is more precise and to a great extent avoids bias. It also saves time and cost of data collection since the sample size can be less in this method.

2.7.4. Disadvantages of Stratified Sampling:

Following are the main disadvantages of stratified sampling:

1. Bias may be caused in the sample through improper stratification. If the strata are overlapping, unsuitable for the problem under study or disproportionate, the selection of the sample may not be representative.
2. A sample in order to be representative must be proportionate. Proportion is attained in random sampling. Automatically in stratified sampling deliberate attempt has to be made in this respect. Attainment of proportion is very difficult through deliberate means specially when of the size of different strata is extremely unequal.
3. Disproportionate stratification requires weighting which again introduces selective factor in the sample. An undue weighting makes the sample unrepresentative.
4. Difficulty may be experienced in putting particular case in a stratum. If the strata are not very clear cut it may be difficult to decide in which stratum any particular unit is to be placed.

2.8. Quota Sampling:

Quota sampling is a special type of stratified sampling. According to this method the universe is first divided into different strata. Then the number to be selected from each stratum is decided. This number is known as the quota. The field workers are generally asked to select the quota from the stratum according to their will. To take an example supposes a sample of 500 families is to be selected. Under this system, the houses to be approached will be decided first and the field workers will be asked to select one family from each house at their will. Quota sampling is a stratified-cum-purposive sampling and thus enjoys the benefits of both above named methods. It makes the best use of stratification economically. It is only useful method when no sample frame is available. However, this method suffers from the limitations of both stratified and purposive sampling. Bias may also occur due to substitution of unlike sample units. Moreover, sampling error and standard error cannot be estimated.

2.9. Multi-stage Sampling:

This method is generally used in selecting a sample from very large area. Under this method the selection of the sample is made in various stages. For example, the following procedure would be adopted to select a sample of a few hundred houses from a large city.

- (a) Divide the whole city into homogeneous regions. Care should be taken to see that each region is approximately equal in size and there is similarity among the people of one region at least regarding the aspect that is being studied.

- (b) Select two primary sample areas from each region or random sampling method.
- (c) Select one block cluster (group of houses) from primary sample area.
- (d) Select some houses from each block cluster on random sampling basis.

Thus, we see that the selection of final sample units is made in a number of stages. The method is thus a combination of random sampling and stratified sampling, and if conducted judiciously it possess the advantages of both the types. Greater representation can be achieved in shortest possible numbers and representation of every area is secured. Multi-stage sampling is more flexible in comparison to the other methods of sampling. This technique is of great significance in surveys of underdeveloped areas where no up to date and accurate frame is generally available for sub-division of the materials into reasonably small sampling units. Under this method surveys can be conducted with considerable speed. However, errors are likely to be large in this method in comparison to any other method. It involves considerable amount of listing of first stage units, second stage units etc., though complete listing of units is not necessary.

2.10. Convenience Sampling:

It is generally known as unsystematic, careless, accidental or opportunistic sampling. According to this system, a sample is selected according to the convenience of the sampler. This convenience may be in respect of availability of source list, accessibility of the units etc. Although the method is most unscientific, yet quite a large number of samples are selected according to this method. A convenience sampling may be used in any one or more of the following cases:

- (a) When the universe is not clearly defined.
- (b) When sampling unit is not clear.
- (c) When a complete source list is not available.

Thus, the selection of names from telephone directory, Industrial or Stock Exchange Directories, Automobile Registration Records will come under this type of sampling.

2.11. Self-selected Sample:

Sometimes, a sample is not actually selected but people themselves opt to be included or not to be included in a sample. Suppose, for example, an enquiry has to be made about the people's liking for a particular radio programme, and an announcement to this effect is made on the radio, in such case, the sample is not fixed. Those who care to reply form the part of the sample. Such a sample is known as self-selected sample.

2.12. Cluster Sampling:

Under this method, the total population is divided into some recognizable sub-divisions which are termed as clusters and a simple random sample of

these clusters is drawn and then the survey of each and every unit in the selected cluster is made.

2.12.1. Principles of Cluster Sampling:

- i) Cluster should be as small as possible with the cost and limitations of the survey.
- ii) The number of sampling units in each cluster should be approximately same.

2.12.2. Merits:

This method provides significant cost gain and it is easier and more practical method which facilitates the field work.

2.12.3. Demerits:

The results obtained under this method are likely to be less accurate if the numbers of sampling units in each cluster are not approximately the same.

2.13. Systematic Sampling:

Under this method a sample is taken from a list prepared on the basis of alphabetic order or on house number or any other method. In this method, only the first sample unit is selected at random and the remaining units are automatically selected in a definite sequence at equal spacing from one another.

2.14. Other Sampling Methods:

2.14.1. Snow ball Sampling:

This method is used where the information about units within the population is not available. For instance, if the researcher wants to study the problems faced by Indians in the City of New York, he would contact all the Indians in the City of New York who could be located. Those contacted would be asked to give the names of other Indians in the City of New York. By repeating the process in several stages a majority of Indians in the City of New York could hopefully be identified and contacted. From this group a sample would be drawn.

2.14.2. Spatial Sampling:

Some population move from place to place. In such a case, the whole population (wherever possible) at a particular place are taken into the sampling and studied.

2.14.3. Saturation Sampling:

It requires a study of all population. In sociometric studies, this technique is adopted. In such studies even if one person is left out, we get distorted results.

2.15. How to select a Sample:

The procedure of selecting a sample differs according to the type of sample selected. Yet certain fundamental rules can be cited. Following steps are generally taken in selecting the sample:

(i) Defining Universe: The whole group from which the sample is to be selected is technically called universe or population. Thus, in order to draw the sample we must first of all have a clear idea of the universe from which the sample is to be drawn. In some cases, the universe has the geographical limits and then it is very easy to locate it. But if the universe depends upon some quality or attribute, definition of the universe becomes rather difficult.

Thus, for example, if an opinion survey about a particular radio programme is to be made the universe will consist of all those people who have listened to that programme. Naturally it is would be difficult task to define such an universe.

(ii) Different types of Universe: The universe from which the sample is to be drawn may be classified into following types:

(a) Definite and indefinite universe: When the number of units falling within the universe can be definitely ascertained it is known as definite universe, e.g., a city or locality or students of a college or university. When this number and the exact units cannot be ascertained we call it indefinite universe. A universe may be indefinite because of its constantly changing nature like young babies. Their number cannot be ascertained over a period of time as these numbers are constantly changing. It may be indefinite when the cases cannot be located, e.g., the users of a particular radio programme.

(b) Real and hypothetical universe: The universe may be a real or simply hypothetical. Hypothetical universe is not used in case of surveys. But it has great utility in statistical analysis. Most of the statistical generalizations are made from a purely hypothetical universe. Thus, for example, after studying the census of population we may draw certain mathematical formulae regarding the distribution of population in different age groups. Now if the total population of a place falling within a similar class is given to us we can form a theoretical frequency distribution of various age groups and thus determine the number of units to be drawn from each group. This type of universe will be known as hypothetical universe.

(iii) Sampling Unit: Before drawing a sampling we have to decide the unit of sample. What shall we select: a house, a family, an individual or a group surveyors have fallen into the error of thinking that as long as they are dealing with human population, the individual persons are the sampling units actually; however, relatively few studies have used people as sampling units.

Following are the main types of sampling units.

(a) Geographical units - e.g., a state, district, city, ward, region or locality.

(b) Structural units - e.g., a house, a flat etc.

(c) Social group units - e.g., a family a school, a club, a church, etc.

(d) Individuals.

The house or residential dwelling is generally considered as the best unit in the sense that it can be easily located.

Qualities of a good unit: Following are the main qualities of a good sampling unit.

1. The unit should be clear, unambiguous and definite. It should be capable of being objectively ascertained and easily located. Thus, for example, an honest man is not a fit unit as it is difficult to be ascertained.

2. The unit of sample should be suitable for the problem under study. Thus in study of the influence of joint family system, family will be the most suitable unit.

3. The unit selected should be standardized if possible if an entirely new unit has been used, its meaning and significance should be explained clearly.

4. The unit should be easily ascertainable. Thus, if an individual is to be selected as unit, it is difficult to find the names of all the individuals concerned and even if they are known, it is very difficult to find them unless their names are accompanied with their addresses.

2.16. Source List:

The list which contains the name of the units of universe from which the sample is to be selected is technically known as source list. A source list may be already in existence or it may have to be prepared. For example, names of all the house owners, telephone owners etc., can be seen from list maintained by respective departments. But the list of the tenants occupying particular area or house has to be prepared. Sometimes, the list may be available in parts and may have to be consolidated. At other times, the list may be exhaustive and relevant. Universe may have to be sorted out.

Qualities of a usable Source list: The following points are worth noting before using the source list:

1. The list should be exhaustive. The entire universe to be studied must be contained in the source list.

2. The list should be up to date and valid. It should not contain dead names and must include the latest additions to the list.

3. The list should contain full information about the units so that the sample may be drawn on stratified basis. It should contain the addresses also so that it may be possible to contact the units selected.
4. The names should not be repeated in the list. For example, if the list of guardians is maintained, the name of a person may be found at more than one place according to the number of school going children.
5. The source list should be suitable for the unit of study. For example, if any family has been selected as unit, the list containing individual names for house numbers would be of no value.
6. Source list must be reliable. It must be maintained by an authority that can be relied upon.
7. Source list must be written by the researcher. Thus, for example, the government may maintain a list of history sheets but it may not be kept open for the public. Similarly, a bank although, maintaining a list of depositors may refuse to supply it to the researcher. Such lists are to be released when a survey is to be conducted by the same department or under the authority of the government.

2.17. Size of Sample:

The size of the sample is an important problem to be decided in case of sampling. This is because the size has a direct bearing upon accuracy, time, cost, and administration of the survey. Large samples are generally hard to manage and are unfit for detailed study, but that may be essential for representativeness. According to Parten - "An optimum sample in survey is one which fulfills the requirements of efficiency, representativeness, reliability and flexibility". The sample should be small enough to avoid unnecessary expenses and large enough to avoid intolerable sampling error.

2.17.1. Factors affecting the size of the Sample:

The size of the sample depends upon a number of factors, the chief of which are stated below:

i). Homogeneity or heterogeneity of universe: If the universe is comparatively homogeneous a smaller size of the sample may be sufficient. If all the units were exactly alike one single unit could serve as sample, but if the universe is heterogeneous, so that very few units are similar, the sample has to be essentially larger in size.

ii). Number of classes proposed: If a large number of classes are to be formed the sample must be large enough, so that every class may be of proper size suitable for statistical treatment. If the size of the sample is small there may be some classes which may contain one or two units only. Some may remain totally unrepresented. The result is that they cannot be analyzed properly and the generalization based upon them will also not be correct. Thus, larger the number of classes proposed greater will be the size of the sample.

iii). Nature of study: The size of the sample will also depend upon the nature of study. If an intensive study is to be made continuously for a pretty long time, large sample is unfit for the purpose as it will require very large finance and other resources. Thus, in case of opinion surveys where people have to be contacted for knowing their opinion about the problem under the study the interview is quite short and much larger number of units may be included in the sample. Similarly, in case of general study large number of cases can be taken but if the study is of a technical nature a large number may become difficult to manage.

iv). Practical considerations: Practical considerations as availability of finance, time at our disposal, number of trained field workers etc., may also be taken as important factor in deciding the size of the sample. The limitations of these resources necessarily limit the size of the sample. One thing must be made clear at this stage. Although these practical considerations do weigh heavily in determining the size of the sample it should never be done at the cost of accuracy. Any amount of money, how so ever small, spent on an unrepresentative sample, is pure and simple waste and must be avoided at all cost.

v). Standard of accuracy: It is generally considered that larger the size of the sample greater is the standard of accuracy or representativeness. Although this is not true in all cases, as mere largeness of size is no guarantee for representativeness. A small but well selected sample may give better results than a larger and thoughtlessly selected sample. National Opinion Research Centre (N.O.R.C.), the premier opinion survey agency of America, is now turning more and more to small size samples. In 1946 N.O.R.C. selected about 2500 cases in a standard poll. In 1948 it was reduced to 1300 cases only. As the technique of sampling is becoming more and more scientific and refined better standard of accuracy has been possible to be achieved by comparatively smaller samples.

In spite of the above argument, the general fact remains that larger sample is necessary for greater reliability. A short sample can only be reliable when it has been drawn by experts and in very favourable circumstances. But that is not always possible. No guidance is generally available for drawing sample. There are other limitations like inadequate source list, lack of complete knowledge about the universe, and the units of which it composed one under these limitations. It is always safer to draw comparatively larger sample to make it more reliable and representative.

vi). Size of the questionnaire or schedule: The size of the questionnaire and the nature of questions to be asked is also a limiting factor for the size of the sample. Larger the size of schedule more complicated the questions to be asked. Smaller is to be the size for proper administration.

vii). Nature of cases to be contacted: The nature of cases to be contacted plays its own part in deciding the size of the sample. If the cases are geographically scattered a small sample is more suitable. On the other hand, if the refusal rate is likely to be heavy or losses of cases likely to be

quite big, a larger sample has to be selected, so that after providing for the cases who may refuse to reply or those that may not be available due to other cause, the actual number of cases that is left out may be large enough to permit statistical analysis.

viii). Type of sampling used: If absolute random sampling has been used much larger sample is required. Random sample is reliable only when sufficiently large sample units are used. Because it is only in large number of cases that law of statistical regularity properly works and every class of unit gets a chance of being selected. On the other hand, if the stratified sample has been selected, reliability can be achieved in a much smaller size. But in stratified sampling the essential conditions are that stratification must be proper. If stratification is unsuitable and improper a large number will only add to the bias in the sample.

These are some of broad considerations that are to be kept in mind. In fact no rigid number can be prescribed for an optimum size of the sample. The nature of the problem is the only deciding factor and the common sense and experience of the researcher the only guide in this matter.

2.18. Use of Sampling in Social Research:

The use of sampling methods has been very old in social research. According to Stephen they were used even earlier than census method. As early as in 1754, the census of population of England was conducted by this method. According to this method average number of people living in a house was assumed to be 6 and total population was calculated by multiplying the number of houses with 6. In 1800 also the same method was used, but this time average number of births was added to it.

In 1936, B.S., Rowntree made a detailed study of working class conditions in the city of New York. He first of all contacted 19362 families. Later on he tried the sampling method to test its reliability. He first of all selected every tenth houses, thus, taking a sample of 1936 houses. He also took subsequent samples selecting very 20th, 30th, 40th and 50th houses. Thus, he undertook five sample studies of the same population every time reducing the sample. His findings were that the results of sampling were quite reliable. According to census type study 31% of the population was living a life below standard. In case of sample it was between 31.1 to 33.1%.

It was Prof. A.L.Bowley who first of all introduced the principle of random sampling in social research. He conducted his study in collaboration with Burnett Hurst to compare the incidence of poverty at different times and places. They visited one in every 20 houses at random. Bowley gave a very elaborate treatise of random sampling and the methods of calculating the standard errors. Snedecor was so much impressed by Bowley's work that at one place he goes on to say - "Bowley's monumental investigation of mathematical theory of representative sampling has since been improved in minor details, with a few notable exceptions, it may be said that most of our

present knowledge of sampling of social facts is explained in the Journal of the International Institute"

Since that time there has been constant technique, methods of calculating the probable has been made of the sampling technique in polls, In fact, social research has been possible improvement in the sampling errors etc., more and more use social researches, surveys and only through sampling method.

Check Your Progress II

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

1) What are the non probability samplings? Describe in detail.

Ans.

2) What are the kinds of stratified sampling?

Ans.

3) What do you mean by quota sampling?

Ans.

4) What do you mean cluster sampling?

Ans.

2.19. Let Us Sum Up:

This unit describes about different types of sampling depending on the research design. Most social science research is based on the study of some and not all the units. This is called a sample study. When each and every unit of the total population is covered it is called a census survey. We have given you an idea of sampling and described the meaning and types of probability and non-probability sampling. Moreover, you have been guided how to select a sample, what should be the source list, what should be the size of sample and how to use sampling in social research.

2.20. Key Words:

- **Random sampling:** It is also called proportionate sampling because each class of item is in the same proportion if the sample is in the universe. A random sample is more suitable, more homogenous and comparatively in large groups
- **Stratified sampling:** Stratification means division of the universe into groups according to geographical, sociological or economic characteristics. It is a combination of both random sampling and purposive selection

- **Quota sampling:** It is a special type of stratified sampling. According to this method the universe is first divided into different strata. Then the number to be selected from each stratum is decided. This number is known as the quota.
- **Cluster sampling:** Under this method, the total population is divided into some recognizable sub-divisions which are termed as clusters and a simple random sample of these clusters is drawn and then the survey of each and every unit in the selected cluster is made.
- **Source list:** The list which contains the name of the units of universe from which the sample is to be selected is technically known as source list. A source list may be already in existence or it may have to be prepared.

2.21. References:

1. Goode, W.J. and Hatt, P.K. (1952) *Methods in Social Research*, McGraw Hill, London.
2. Jahoda, M., Merton D. and Stuart, W.C.(1951) *Research Methods in Social Relations*, Dryden, New York.
3. Young, P.V. and Schmid, C.F. (1977) *Scientific Social Surveys and Research*, Prentice-Hall: New Delhi.

Unit – 3

Tools of Data Collection – Observation, Questionnaire, Schedule, Interview, Case – study

Learning Objectives:

After completion of this unit, you should be able to:

- understand different tools for data collection
- distinguish different tools being required for different situation
- describe the importance and functions of different tools for data collection

Structure:

- 3.1. Introduction
- 3.2. Tools of Data Collection
- 3.3. Observation
- 3.4. Schedule
- 3.5. Questionnaire
- 3.6. Interview
- 3.7. Case study
- 3.8. Let Us Sum Up
- 3.9. Key Words
- 3.10. References

- 3.11. Check Your Progress – Possible Answers

3.1. Introduction:

Most research studies collect fresh data from the respondents even though already existing data are utilized for developing the research design or supplementing the data to be collected. So, here, we will discuss five important and widely used tools of data collection used by social scientists, viz., Observation, Schedule, Questionnaire, Interview and Case study.

3.2. Tools of Data Collection:

- Observation
- Schedule
- Questionnaire
- Interview
- Case- study

3.3. Observation:

Observation means acquiring knowledge through the use of sense organs. It implies the use of eyes rather than the ears and the voice. Observation is systematic and deliberate study through the eye of spontaneous occurrences as they occur. The Oxford Concise Dictionary defines Observation as 'accurate watching and noting of phenomena as they occur in nature with regard to cause and effect or mutual relations'. Dr. P.V. Young defines Observation as 'a systematic and deliberate study through the eye of spontaneous occurrences at the time they occur'. It is a systematic viewing coupled with consideration of the seen phenomena. It is a deliberate study through the eye, which may be used as one of the methods for scrutinizing collective behaviour and complex of institutions as well as separate units composing of totality. According to Goode and Hatt, observation includes the most casual uncontrolled experiences as well as the most exact film records of laboratory experimentation. Observation is defined as the process of recognizing and noting people, objects and occurrences rather than asking for information. Under the Observation method the information is sought by way of investigators' own direct Observation without asking from the respondent. Observation seeks to ascertain the external behaviour of persons in a variety of situations. The external behaviour of persons in a variety of situations are both controlled or uncontrolled.

Observation of a scientific technique: Science begins with Observation and must ultimately return to Observation for its final validation. Observation becomes a scientific technique to the extent that it:

- It serves a formulated research purpose.
- It is planned systematically.
- It is recorded systematically and related to more general propositions.
- It is subjected to checks and controls on validity and reliability.

3.3.1. Components of Observation:

There are three important components of observations:

1. Sensation,
2. Attention, and
3. Perception.

3.3.2. General Characteristics of Observation Method:

Observation, as a technique of data collection, has the following general characteristics:

i) Physical and mental activity: Observation involves the use of sense organs of the investigator. He has to see or hear the thing and then keep it in mind or record the same for careful analysis at a later stage.

ii) Specific, selective and purposeful: A researcher selects his area of activity and the things he is required to observe. Then only, it becomes a

purposeful research affair. Observation is guided by distinct motives or gainful purposes.

iii) Tools of research: If it is to be finally useful, Observation should be based on scientific tools of research which have been fairly standardized.

iv) Direct study: This is a scientific method where the researcher makes a direct study of the situation or phenomenon. It is, in fact, the only method for collecting reliable primary data.

v) Cause and effect relationships: This method tries to establish a logical relationship between the cause and effect in the observed phenomenon.

vi) Systematic and scientific: Intelligent planning, expert execution, adequate recording, and, scientific interpretation are various steps involved in a scientific and systematic Observation.

vii) Observation is expert: Observation is expert that is, done by a specially well-trained person for distinct purposes.

viii) Observation is quantitative: Observation is usually with a tally of the number of instances that a particular type of behaviour has occurred.

Carefully noted: All occurrences have to be carefully noted either at the time of Observation or immediately after the Observation. The social investigator uses recording devices such as check lists, rating scales, score cards, sealed specimen, and blank forms for tallying frequencies. The use of well constructed proforma helps in summarizing and quantifying of the data collected by Observation.

Subjects to checks and verification: The results of all systematic observation are subjected to checks and verification.

3.3.3. Observation as a Technique of Data Collection:

As Goode and Hatt rightly put science begins with Observation. Copernicus has observed the things which have occurred during his time. Even today, Observation is the touch stone of scientific activity in establishing the cause and effect relationship. Observation proved to be an important technique of conducting research in physical, natural and social sciences. Observation is, perhaps, the only method perfectly suited to study the behaviour of social phenomena. Observation is the only way through which the child accumulates knowledge uses it for future retrieval.

As regards to social sciences, observation is the most commonly used method in collecting data regarding the behaviour of human beings of a social phenomenon. In the studies like consumer behaviour, executive behaviour, and workers behaviour, Observation proves to be a very good technique of data collection.

3.3.4. Process of Observation:

Observation is a sequential process which helps the researcher to record results with precision. Lin Nao in his 'Foundation of social Research' has identified five sequential steps in the observation method. They are: (i)

Preparation and training, (ii) Entry into the study environment, (iii) Initial interaction, (iv) Observations and recording, and (v) Termination of field work.

i) Preparation and training: The researcher must decide what, where and how to observe the thing. He should prepare the necessary ground for Observation. For example, the researcher is interested in observing the morals and commitment of the workers in a factory. In this context, he has to decide whether he is concentrating on the entire work force or only a section of them. Then he should fix up timings for Observation. The important aspect among the other things is what he should observe, for example, production environment, relationship between supervisor and workers, or relations among workers or anything. This enables the researcher to have a clear understanding about the problem, methodology and the necessary training for initiation of the project.

ii) Entry into the study environment: The second step is entering the study environment. If the study is related to a governmental establishment, the permission of the appropriate authority may be necessary. If the study is related to a local group like the village panchayat, a letter from the proper channels should be supplemented with the approval of the key persons to gain entry into the study group. After gaining entry into the group, the observer should identify his role either as a participant observer or non-participant observer etc. He should also develop normal relationship with the group (i.e., the establishment of rapport). Then only the observer will become acceptable to the group. He should impress upon his informants about the confidentiality of their identification in the study.

iii) Initial interactions: The researcher should establish preliminary contact with situation and initial interaction with the respondents. The researcher is required to use his ingenuity in mixing and interacting with the people.

iv) Observation and recording: Observation normally does not pose a problem once rapport has been established. But recording the Observation poses a problem. The researcher should take utmost care in order not to disturb respondent's original or true behaviour. The researcher may use good mechanical devices to improve the recording facility and accuracy. The re-searcher should take care to record the events in sequence and see that it does not miss any important stage in a sequence in the whole process. Further he should verify the creditability of statements of respondents and accordingly classify the data even when he is recording the same.

v) Termination of field work: This last step involves not only the termination of research work on hand but also the termination of emotional relations, if any, developed during the study. There should be no bias and distortion in the analysis and interpretation of data.

3.3.5. Aids in Observation process:

The use of tools like diaries, field notes, maps, checklists, cameras, audio and video tape recorders etc., may enhance precision to the Observation process. Let us discuss these aids briefly:

Diaries: The researcher after observing the situation can keep a record of each event. This may take the form of a diary. If carefully written, these things give a fair and sufficiently long account of the situation.

Field notes: An observer must record detailed notes of everything he observes. Distortion, which will hinder the progress of the work, must be avoided.

Maps: The utility of the map is not limited merely to the graphic portrayal of facts.

Maps are often indispensable in locating problem, verifying hypothesis, analyzing data and discovering hidden facts and relationships. The social base maps showing the relation of typographical aspects of a community to its social organization will call for further study and Observation which probably would have never come to light otherwise.

Analogy: In analyzing a social institution or social relationship and in answering questions like how does someone become an embezzler? Analogies are particularly useful.

Checklist: It is one of the most basic structural methods of Observation. This device is often used in making Observation to ensure that an observer looks for every bit of evidence that he has previously determined as essential. It should be prepared in advance of the Observation but should include blank space for recording phenomena that were not anticipated in the formulation of the problem. There are two types of checklists-static and action.

In the static checklist such information as sex, race or age may be recorded together with the characteristics of environment. Action checklist are used to record actual behaviour. This technique is particularly appropriate for behaviour which has a limited number of alternatives. The investigator simply tallies whether the behaviour has occurred or not.

Sociometric scales: These were used in the measurement of social process of adjustment etc. These are regarded as tools or instruments of observation with the same function as the physician's stethoscope or thermometer. The unique value of these scales is the increased clarity of the picture as compared to subjective judgements.

Sociometric measure is a measure of assessing the attraction and repulsions within a given group. Sociometric self-rating, scaling methods, group preferences, records, multi-relational sociometric survey etc., are some measures of sociometry.

Mechanical devices: Scientific instruments like microscope are used by the researchers in physical and natural sciences. In social science research, scholars take the help of devices like camera, tape recorder, video to record their observation and data. These devices help the researcher to present accurately a mass of detail in a concise and effective form.

3.3.6. Types of Observation (Choice of Observation techniques):

i) Natural vs. Contrived Observation:

Natural Observation occurs when we observe behaviour as it is taking place in a normal setting, e.g., watching children while they select toys. In this type of Observation no attempt is made to manipulate the field of study or behaviour of the observed. These studies help the store managers to improve their collection of a particular variety. When researchers rely on natural direct observation, they frequently find themselves wasting a great deal of time while they wait for the desired event to happen. To reduce this problem Observation may be made efficiently. For example, in an actual study utilizing contrived observation, an uncombed and unshaven observer dressed in old clothes entered a departmental stores, then observed how many minutes it took before a sales person arrived to wait on him. The average was nearly 10 minutes. However, when the same individual was dressed in a sports coat and slacks he had the good fortune to be waited on in an average of just 5 minutes, a significant reduction. This enabled the researcher to conclude that the attentiveness of sales person is a function of customer dress.

ii) Participant Observation (P.O):

When the observer participates with the activities of the group under study, it is known as P.O. The researcher mingles with the group and actively shares his activities with the life of the group on whom he is observing. Thus, a participant observer makes himself a part of the group under study. He freely mixes with social activities of the group. The purpose of critical study is concealed under the desire to learn folklores and more, customs and traditions.

Merits of Participant Observation: The observer can obtain more hidden aspects, significant and symbolic factors which are not easily exposed to others. He can gain more insight into understanding the group's social, economic, and political life. He can gather more information.

The observer should desist from acquiring any special status in the group. The moment he becomes emotionally involved, he may acquire bias and loose his identity as an observer and may not be in a position to do justice to the investigation.

iii) Non-participant Observation (NPO):

When the observer does not actually participate in the activities of the group, but simply observes them from a distance, it is known as a N.P.O. Purely NPO is extremely difficult. However, being a stranger, the observer is less involved emotionally. He can maintain his own status as a researcher and it will help to maintain objectivity and impartiality.

An N.P.O. in practice is only a quasi-participant observation.

iv) Controlled Observation (C.O.):

When observation takes place according to definite prearranged plans, involving experimental procedure, it is called controlled observation. This method affords greater precision and objective and can be repeatedly observed under identical conditions. The main purpose of a C.O. is to check any bias due to faulty perception, inaccurate data, and influence of outside factors on the particular incident.

Generally, controlled observation takes place in various experiments that are carried out in a laboratory or under controlled conditions.

The control exercised in the Observation is of two types:

- (i) Control over the phenomena and
- (ii) Control over the observation.

In the first type, the phenomena are put to laboratory type test under guided conditions. Such experiment was made to study the effect of lighting upon production. Various kinds of work studies come under this type. The study of the behaviour of children and infants also come under this type.

Control over the Observation: When the phenomena under study cannot be subjected to guide experiment, the researcher tries to control and guide his own perception and thus, to avoid any bias due to faulty observation. Following kinds of control devices are generally used for this purpose:

1. Detailed Observation plan,
2. Use of schedules,
3. Use of mechanical appliances,
4. Use of sociometric scales,
5. Use of hypothesis,
6. Team Observation, and
7. Use of control groups.

v) Non-controlled Observation:

If the observation takes place in the natural setting, it may be termed as uncontrolled observation. No attempt is made to use any instruments, i.e., the mechanical aids are not used and the data are collected without standardizing procedure and without resorting to a random sample. When the Observation is made in the natural surroundings and the activities are performed in their usual course without being guided by any external force, it is non-controlled observation. The major aim is to get a spontaneous picture of life and persons. This type is not very reliable. However, most of the social phenomena have to be observed in an uncontrolled way.

vi) Direct Observation (DO):

Under DO, actual behaviour, verbal or non-verbal, is observed first hand. For instance, to study student behaviour in a particular situation, you may just go and watch them while they are behaving in that situation.

vii) Indirect Observation (IO):

Under this, results or physical traces of behaviour are observed. For example, from the traces the students have left, or the way the chairs are arranged or disarranged or from other scenes, you can guess how they would have behaved in that particular situation.

viii) Overt and Covert Observation:

In Overt Observation, those being observed are aware of the investigator's presence and intention. In Covert Observation, the investigator's presence is hidden or undisclosed or his or her intentions are disguised.

ix) Structured and Unstructured Observation:

If the observation is characterized by a careful definition of the units to be observed, standardized conditions of observation and the selection of pertinent data of observation, it is called as structured observation (S.O). In S.O. the investigator looks for and systematically records the incidence of specific behaviours (incidents). This method is considered appropriate in descriptive studies. Unstructured observation is considered appropriate in exploratory research work. When no careful definitions and conditions are entertained, information is gathered in natural settings. It is called as unstructured observation (U.S.). In U.S., all behaviours are considered relevant at first and recorded, but later on, upon reflection the investigator will distinguish between the important and trivial behaviour.

3.3.7. Planning and Execution of Observation:

1. The observer must have a sound background of theory and knowledge in the area of his study.
2. The researcher must carefully select and define clearly and precisely the activities to be observed.
3. The next important aspect is formulation of testable hypothesis.
4. The researcher must decide the size of units to be observed.
5. He must decide the type of Observation technique to be used.
6. He must determine the period to be observed.
7. He should select appropriate aids and mechanical devices to be employed.
8. The researcher must also decide the number of observers needed.
9. He must arrange for expert training to the observers.
10. He must arrange for preliminary Observation.
11. He must arrange for proper recording of data.
12. After data have been collected, he has to pay full attention to their analysis and interpretation.

3.3.8. Importance of Observation:

- It is the simplest and most non-technical method.
- It is one of the main sources of formulating hypothesis.
- Observation, at times, affords greater accuracy than other methods.
- The data collected through Observation is more convincing than otherwise. It is most important in testing the validity of the hypothesis framed.
- It is a common method for all sciences. It helps to study the subject in depth.
- It helps in the free flow of information.

- It is possible to record behaviour as it occurs.
- It is a very useful technique of studying various activities and characteristics of infants and children.
- The researcher is able to record natural behaviour of the group.
- He can collect a wide range of information.
- It is a useful method of doing research in delicate areas.
- It is less expensive.

3.3.9. Limitations of Observation:

1. All occurrences may not be open to Observation.
2. Personal bias distorts the Observation.
3. Systematic and preplanned Observation is very difficult.
4. Natural factors such as weather conditions may affect the observational task.
5. There are difficulties in sampling.
6. Faulty perception.
7. The researcher's interpretation is mostly impressionistic.
8. Some historical events are not open to direct observation.
9. The information gathered may be in tune with the whims and fancies of the observer.
10. This method is useful only in the case of relatively small group or system.

3.4. Schedule:

The schedule is the form containing some questions or blank tables which are to be filled by the workers after getting information from the informants. The schedule may thus contain two types of questions firstly those that are in form of direct questions and secondly those that are in form of a table. There are some kinds of information that can be procured only by putting a question, e.g. questions for eliciting- the informants opinion, attitude, preferences or his suggestions about some matter. There are others which may better be put in form of tables. Generally most of them may be used interchanging. Thus for knowing the nature of post held by a person, it may either be in form of a question- "what is the nature of post held by you at present" or in form of a table with heading-"Nature of post held...." Tables should be preferred to questions wherever they can conveniently be used. They are clearer to observe and easy to tabulate.

3.4.1. Purpose of Schedule:

The purpose of schedule is to provide a standardized tool for observation or interview in order to attain objectivity. By schedule every informant has to reply the same questions put in the same language and the field worker has no. of choice to get the desired reply by putting a different question or changing the language of the same question. The order of the questions is also the same and thus the whole interview takes place under standardized conditions, and the data received is perfectly comparable. It has now been

proved that responses of the people regarding the same matter differ, if the language of the question is even slightly different or even the place of question is changed. A perfectly standardized form is, therefore, needed for any objective study.

The other purpose of schedule is to act as memory tickler. In the absence of any schedule the field worker may put different number of questions to different people. He may forget to enquire about some important aspects and then he would be required to go over the whole process again to collect that missing information. In case of observation too, the schedule keeps his memory refreshed, and keeps him reminded of the different aspects that are to be particularly observed.

Yet another purpose of schedule is to facilitate the work of tabulation and analysis. When information is collected in a conversational form by means of free story method, the interview is mostly in form of a narrative, or historical account. It becomes very difficult afterwards to sort out the relevant parts and classify them into different groups for the purpose of further analysis. Moreover the classes may not be homogeneous because of the 'different methods of recording and different aspects observed. The schedule puts the whole thing in a structured form and tabulation and analysis become very easy. In fact the questions are formed, while keeping in mind the tabulation plan, to facilitate this work.

3.4.2 Kinds of Schedules:

The schedules used in the social research may be classified into following four groups according to the use to which they are put.

1. Observation Schedule- These schedules are used for observation purposes. They contain specific topics upon which the observer has to concentrate and the nature of information that he has to record. Such schedules make the observation more pointed and accurate by pointing clearly what is to be observed. How it is to be observed and how it is to be recorded. A fuller and more detailed discussion of such schedules has been given in the chapter on observation.

2. Rating Schedules- They are used for sociological or psychological research vocational guidance. They are used in those cases where the attitude, or opinion is to be measured. Different ranks or scales are constructed for this purpose. A full discussion of these schedules has been given in chapter dealing with measurement of attitudes.

3. Document Schedules- These schedules are used for recording data from written documents like autobiography, case history, diary or official records maintained by the government. Such schedules are used for preparing the source list of collecting preliminary information about the universe.

4. Interview Schedules- These schedules are used for interview purpose. It is with these schedules that we shall be mainly concerned in this chapter.

They contain standard questions that the interviewer has to ask and blank tables that he has to fill up after getting information from the respondents.

3.4.3. Essentials of a Good Schedule:

According to **P.V. Young**, there are two essential conditions of a good schedule. (1) Accurate communication and (2) Accurate response.

1. Accurate Communication- Accurate communication is achieved when respondents understand the questions in the same sense which they are expected to convey. Thus the basis of accurate communication is proper wording of questions. The questions should be so worded that they may clearly carry the desired sense without any ambiguity. Various tools for achieving accuracy of communication have been discussed in the succeeding paragraphs.

2. Accurate response- Accurate response is said to have been achieved when replies contain the information sought for. This information should be unbiased and true. The respondents may also co-operate in filling the schedule, by giving out correct information.

Following steps are generally taken to achieve the above two objectives:-

- The size and physical structure of the schedule should be attractive.
- The questions should be clearly worded, easy to follow without any ambiguity or doubt.
- Right type of questions should be asked.
- Questions asked or information sought should be adequate and relaxant to the enquiry, so that final generalizations may be based-upon it.
- The information sought should not only be valid, it should also be capable of being tabulated and if possible being subjected to statistical analysis.

3.4.4. Procedure for forming a Schedule:

While framing the schedule the first question to be asked is –“what are the different aspects of the problem?” The problem under study should first of all be split up into various aspects. The determination of these aspects will depend upon clear understanding of the problem under study. Thus, for example, if the survey of the effect of employment of women upon family life is to be made the different aspects of the problem would be-care of the children, household work, marital relations, health and general attitude etc. Every aspect is to be studied in complete detail.

The second step is to be decided- "What information is necessary for a valid generalization on each aspect. For this purpose each aspect has again to be broken up into a number of sub parts. These sub-parts should be quite exhaustive to give a full and complete picture of the aspect under study. Thus in the above illustration, care of the children may further be divided into care in respect of food, clothing, study, companionship,

manners, health and character etc. Information may be elicited about each of them.

The third step is the framing of actual questions. This part deals with the form and working of the questions. More than one question may be asked to get complete information about the particular aspect. Care should be taken to see that the questions convey the exact sense, are easily followed by the response and they will be willing to supply information without any hesitation bias or distortion of facts. When information can not be secured by direct questions, indirect questions may be resorted to. This part is the most vital part of the schedule and any error in it may invalidate the whole enquiry through biased, incorrect, incomplete or irrelevant information.

The fourth step is general layout of the schedule and arrangement of questions. When the questions have been given definite form the other problem is to arrange them in proper form. The layout or physical design of the schedule is very important. If it is well planned and attractive to look at, replies may be coming forth without hesitation. A bad, clumsy and unbalanced schedule is very difficult to fill and errors may be frequent. Various steps are taken to achieve this objective. They have been discussed in detail in the latter part of this chapter.

The last step is testing the validity of schedule. After the schedule has been prepared, it has to be tested on a sample population to find out any discrepancies left out. Whatever may be the degree of precaution taken, some slips are bound to be left out and cannot be located unless the schedule has been put into operation. Thus the schedule should first of all be prepared on trial basis, should be tried. Any discrepancies in information sought, wording of question, their sequence etc. should be amended in the light of the experience thus gained.

3.4.5. Pilot studies and Pretests:

Pilot studies and pretests are necessary measures for framing a perfect schedule. A pilot study is undertaken before a schedule or questionnaire is drafted, a pretest is taken after it has been completed. Pilot study is the preliminary study of the universe in question to get an early idea about it. It may be undertaken without any hypothesis or with provisional hypothesis. It gives an idea of different variables involved, nature of the problem,, possible difficulties in interviewing, kind of response likely to be available etc. It is on the basis of this information that the actual schedule or questionnaire is formed. If the sample selected for the pilot study is similar to the main sample a complete idea about the nature of the Problem and the respondents will be available and the schedule drafted will be more perfect.

3.4.6. Advantages of Interview through Schedules:

Following are the main advantages of conducting an interview through schedules:

1. The percentage of response is much higher than in case of mailed questionnaire. The field worker is personally present, and respondent generally finds it very difficult to refuse to grant him an interview. Thus all the cases, excepting those who are strongly opposed or adamant not to reply, can be contacted. If there is any mistake in the address, or the respondent has changed the address the same may be made known and corrected. In case of a mailed questionnaire such a facility is absent.
2. The field worker is personally present to remove any doubt or suspicion regarding the nature of enquiry or meaning of any question or term used. The answers are, therefore, not biased because of any misunderstanding. Moreover, the field worker is there to check that the answers are not absolutely exaggerated. He will verify them with what he has seen, put cross questions, consult the neighbours or those who know him in case of any grave doubt about the reply. Besides the respondent has to reply questions all at once and gets no time for manipulating facts as in case of questionnaire. The answers of a schedule are generally more correct and representative than the questionnaire.
3. The field worker may recreate an atmosphere for proper response. He may start a discussion, develop the interest of the respondent before showing the schedule. A right atmosphere is very helpful for getting correct replies.
4. The schedule is filled by the field worker himself. He may follow short cut methods of recording and the interview may be finished much earlier. Besides, a tempo of discussion is maintained and the whole interview appears to be one discussion rather than answering of stray, questions. The respondent does not feel tired or bored. Supplementary questions may be put to enliven the whole discussion. Moreover, the difficulties of bad handwriting use of pencil etc., are also avoided as every schedule, is filled by the interviewer.
5. The personal contact with the respondent enables the field worker to probe more deeply into the character, living conditions and general life pattern of the respondent. These factors are very important to understand the background of any reply. A reply that may appear to be absolutely strange and uncalled for may be found to be absolutely natural viewed from these backgrounds. An interview if properly conducted can supply much useful information over and above the one called in the schedule, and may form basis of further enquiries on the subject.
6. Personal contact may reveal any defect in the sampling. Some important cases might have been left out and can be known from the actual visit.

Similarly defects of schedule can also be easily located. If some important questions or aspects of the problem have been left out in the schedule, the same can be located by direct contact, and discussion with the respondent. That is why, even in case of mailed questionnaire, the pilot study and pretest are conducted by direct interview method.

7. Last of all, the schedule method provide an opportunity for human element to be present at the time of filling the schedule. The lifeless questionnaire, howsoever cleverly, drafted, and attractively printed can be no match to the living field worker who is personally -present to enliven the whole atmosphere with interesting discussion, act as an active counterpart to the interview, share his emotions and feelings and encourage him to express his view freely and frankly.

3.4.7. Limitations of the Method of Schedules:

The method of schedules, inspite of its numerous advantages mentioned above, has following limitations also:

1. It is a very costly affair: The cost per case is much higher in the method of schedules than in case of mailed questionnaire. A. large number of field workers has to be engaged, and trained in the work of collection of data. Extra staff is needed for the supervision n of their work. Conveyance charges have to be paid to the field workers. All this entails a lot of expenditure and a researcher with limited financial means finds himself in difficulty to adopt this method.
2. The method creates administrative problem too, particularly if the area to be covered is large and respondents are widely dispersed. An elaborate organisation has to be set up for training of the field workers, supervision of their work, rechecking of schedules etc. All this is not required in case of mailed questionnaire method.
3. The presence of the field worker while encouraging the respondent to reply may also prove a source of bias in the interview.

At times the opinion of the respondent is influenced by the field worker and he may reply not what he thinks to be correct but what he thinks the investigator wants. The field worker may actively take sides, and try to influence the response deliberately. If there is such loophole, the damage is irreparable and cannot be prevented even with best precaution.

3.5. Questionnaire:

Questionnaire is the structured set of questions usually sent by mail, though sometimes it is delivered by hand also. The hand delivery could be at home, school/college, office, organization, and so on. Questionnaire is described as a document that contains a set of questions, the answers to which are to be provided personally by the respondents.

The importance of the survey is explained to the respondents through a covering letter. Usually a self-addressed stamped envelope is sent to the respondents along with the questionnaire to reduce their expenses. The follow-up request for returning the questionnaire is made through repeated letters.

Questionnaire is used as a tool when: (i) very large samples are desired, (ii) costs have to be kept low, (iii) the target groups who are likely to have high response rates are specialized, (iv) ease of administration is necessary, and (v) moderate response rate is considered satisfactory.

3.5.1. Advantages of Questionnaire method:

Following are the chief advantages of the questionnaire method:-

1. Low cost- The cost of conducting research is sufficiently low. All that the researcher has to spend is on printing of questionnaire or postage charges. The cost per case thus comes sufficiently low.

2. Large coverage- Under this method, a much larger sample may be drawn and people dispersed over very long distances can be contacted without any extra cost. Thus, this method is especially suitable for those cases where the respondents are scattered over large areas.

3. Repetitive information- Questionnaire method has also been found to be more useful where information has to be gathered at regular intervals. In case of schedule method the cost of such repetitive information would become prohibitive.

4. Greater validity- Questionnaire has some special advantages as regards validity of information. Some people are generally shyer in talking to a stranger their personal matters, than, in writing them down. Besides, the sender need not put in his signature or address on the form. Thus it has generally been found that people are more frank in giving replies to a questionnaire than to a schedule.

5. Rapidity- Replies may be received in much smaller time than schedule, provided the respondents co-operate with the investigator. But at times the people to whom the questionnaire has been sent keep it, and send only after constant reminder. In such cases the same time may be taken in questionnaire as in a schedule.

3.5.2. Limitations of Questionnaire method:

The method of questionnaire is subject to following limitations: -

1. Unreliability- The information gathered through questionnaire cannot be said to be Very much reliable. Difficulties in the reliability of questionnaire have been discussed at length in the early part of this chapter.

2. Incomplete entries- Most of the questionnaires are very poorly filled. Some of them are left out altogether, others may be filled in such a way that 'it may be difficult to follow what the respondent actually means. There may be defects of language. Abbreviations may be used in giving replies.

3. Difficulties of bad handwriting- The writing on the questionnaire are sometimes illegible. Pencil is sometimes used. Often there is too much

erasing or over writing so that it becomes very difficult to follow the replies.

4. Poor response- The response too sometimes is very poor. A sufficiently large number of cases drop out, thus causing a bias in the sample. The methods of increasing response have been discussed earlier.

5. Possibility of manipulated replies- In case of schedule the field worker is present face to face. He may observe things, and put cross questions. Thus manipulation of any information is not easy. In case of questionnaire the respondent gets sufficient time to supply manipulated information and it is very difficult to detect the error so caused.

6. Lack of personal contact- The field workers does not establish any personal contact in case of questionnaire. Thus there is nobody to remove any doubt if it arises. The information supplied by the questionnaire is just blind grouping and no definite confidence can be placed upon the information in the absence of any means of verification.

7. Impossibility of a deeper problem- In a questionnaire method it is not possible for the researcher to probe deeply feelings, reactions and sentiments of the respondent. All this requires the creation of a proper atmosphere which requires the presence of the researcher himself. Parten has rightly pointed out "On this matter there can be little doubt that good interview can probe far more deeply than the best questionnaire."

The questionnaire is thus suitable for highly selective groups specially those who are educated and responsible. It is also more useful when the people to be contacted are scattered over a wide range geographically. It is generally used in Case of exploratory work before beginning more intensive study.

3.6. Interview:

Social research has one fundamental advantage over physical researching the sense that the researcher can talk to his subject, know his feelings and reactions. He need not rely entirely on his own senses- for the purpose of observation, but can take active help from the subject also. The fundamental advantage is put to its fullest use in case of interview.

According to **Pauline Young** "interview maybe regarded as a systematic method by which, a person enters more or less imaginatively into the life of a comparative stranger." It is like a tape recorder in which the past incidences, feelings and reactions of the Subject are-played back to the living present to be listened by the interviewer with a scientific approach, always ready to find sequences of fundamental traits of human behaviour, underlying universal laws -guiding and motivating human actions and reactions. The researcher tries to penetrate deeply in this imagination, into the. Circumstances being narrated by the subject and realize the full significance of the feelings being expressed byhim.

3.6.1. Purpose of Interview:

The purpose of interview is two fold (1) Securing certain information from the subject, which is known only to him and cannot be gathered from any other source and (2) laboratory study of verbal behaviour under given circumstances. For the first purpose the interviewer tells the topic to the subject, and he narrates the, incidents of his life, his feelings and reactions pertaining to it. The interviewer listens to-these narratives, cautions rind alert, trying to find how Tar they fit in the hypothesis framed by him. For the second purpose the interest of the researcher is more centered in the attitude and expressions of the subject than the actual facts. Here he acts more as a social psychologist than as a sociologist. His attention is more focused at the reactions and changes in the moods and gestures of the subject while he is relating a particular incident.

Both the purposes generally go hand in hand in any social research. As Lundberg rightly remarks- "The researcher; is interested in the objective data 'secured from the interview such as. income, number of children, their ages etc. and also in the personality of the informant- his attitude, prejudices, likes and dislikes as revealed by his verbal behaviour including the subtle gestures that accompany it, such as facial expression, loop of voice and so forth." Special emphasis may however, be given to any one of the aspects, and in a social interview it is generally observed as an aid to judge the validity ofthe statement ofthe subject.

3.6.2. Kinds of Interviews:

Interviews are generally of the following types:

(i) Structured interview:

It is also known as controlled guided or direct interview. In this kind of interview a complete schedule is used. The interviewer is-asked to get the answers to those questions only.lie generally does not add anything from his own side. The language too is not changed. He can only interpret or amplify the statement wherever necessary. Such interview has been explained in the chapter on schedules.

(ii) Unstructured interview:

It is known as uncontrolled, unguided or undirected interview. No direct or predetermined questions are used in this type of interview. The field worker may be told certain broad topics upon which the information is to be collected. It is generally held in form of free discussion or story type narrative. The subject is asked to narrate the incidents of his life, his own feelings and reactions and the researcher has to draw his own conclusions from it. Unstructured interviews are generally used in the following type of enquiries:

1. When pilot studies are undertaken in order to get an idea of the phenomena under study this type of interview is used. A contact is made with the subject, the problem under study is discussed in its various aspects, and the opinions and the suggestions of the respondents are noted.

Thus the researcher gets a deeper insight of the problem by coming into contact with the persons who are directly affected by it. He knows the type of persons, he has to contact together with their 'likes and dislikes, moods and manners. This helps him to get prepared for structured interview afterwards. , Sometimes entirely new aspects of the problem are posed by the Subjects, which the researcher has never thought of. Thus non-directive study is undertaken as a forerunner to ultimate directed study.

2. Where reactions and feeling to the subject are to be studied pertaining some emotional incident. In such a case the reply cannot be given in one sentence abruptly. The same situation has to be created for this purpose. .When the subject begins to narrate those circumstances, he is emotionally taken back to the same conditions when the incident actually occurred. Naturally their expressions come from greater depth and have more of truth and reality in them.

3. When change in the moods and gestures are to be studied. If the researcher wants to study the change in the gestures and physical expressions, to see how a person physically reacts to certain given circumstances, it can be best studied by this method. Every person has to pass through various, kinds of incidents causing emotional upsurge of different kinds. At such times marked physical changes are noticed in him. He begins to react in a particular way which is apart from his normal behaviour. Such a kind of study is only possible when the subject is put back in the same circumstances.

To take a concrete case, let us suppose a divorce has taken place. Naturally the real cause of divorce cannot be known by putting one single 'direct question or even it set of questions. At such time the person is generally guided more by his emotions than by rational thinking. Unless we are allowed to have a vivid idea of those circumstances which compelled him to sever his connection with his life companion, and thus bring to an end the long happy married life in which both shared the joys and sorrows of life together, we can never fully appreciate the reasons given for the divorce. It is but natural that the couple must have passed through a prolonged period of stress and strain. Several attempts at reconciliation must have been made, each one ending in utter failure and making the one bitter against the other. Then at last the illfated time came when the two decided, to separate. Unless the full circumstances, their emotional implications are known and appreciated with the same intensity the reasons for divorce may appear to be rather petty and insignificant. A non-directed, free story type interview is the only alternative to let the researcher enter the life of the subject and realize the real significance of his various actions and reactions:

(iii) Focused interview:

Such an interview is generally used to study the social and psychological effects of mass communication e.g. the reactions of film show or radio programme. Merton has given the following characteristics of a focused interview.

Interviewee is known to have been involved in a particular-concrete situation, for example having seen a- particular film or heard a broadcast.

The situation under study is thus the one that has already been analysed prior to interview, the field worker, tries to focus his attention to the particular aspect of the problem, and tries to know his experiences, attitudes, and emotional response regarding the concrete situation under study. Help is generally taken of interview guide which gives the area to be covered, general, nature of questions to be asked. This type of interview is also in form of free story or narrative type, and is in many respects similar to non structured interview previously described.

(iv) Repetitive interview:

Interview is repetitive in nature when it is desired to note the gradual influence of some social or psychological process. There are some social changes that have a far reaching influence upon the people and it is sometimes desired to know the effect of such factors in time sequence: Thus, for example, suppose a village is linked with some road connecting it with the city naturally it will have its own influence upon the life of the people. The influence of course would not be sudden. There will, be a gradual change in economic status, standard of living, attitudes and opinions, and inter-relationships of the people. In order to study this influence in time sequence a study has to be conducted at regular intervals to mark the gradual change taking place. . The 'repetitive interview is generally a very costly affair. A permanent organization has generally to be set up for the purpose. The respondents have to be permanent resident so that they may be available for interview at different times. A prolonged record has also to be maintained to study the change in continued sequence. The number of cases too has to be limited and they must be localised in a particular place.

3.6.3. Preparation for an Interview:

If interview is to be produced on proper lines so that valid results may be obtained, certain preparations must be made before the actual interview begins. These preparations are of following nature:

(1) Understanding the Problem

As soon as the interview begins, interviewer is Most likely to be faced with a volley of questions from the respondent regarding the interview Unless the interviewer has a convincing reply to all these queries, they cannot expect to have an easy go in the matter. In order to be able to reply these various questions likely to be asked the researcher must have a thorough knowledge of the nature of problem under study, its various aspects, importance of the study, and effects upon various classes and situations. A thorough study of the problem and all the relevant data on the matter must, therefore, be by-the researcher before interview is made.

(2) Interview Guide

The second step in the preparation of interview is the construction of interview guide. Interview guide is a brief written document giving an outline of the different aspects to be studied. It gives a general plan for the interview, various topics that are to be discussed, some important questions that must be asked, the general technique to be adopted as well as any

precaution to be specially taken. But it must be clearly understood that interview guide is meant only for giving general direction in the matter and not putting the whole interview into a definite mould. Pauline Young has rightly remarked- "Interview guide is no oral questionnaire. When interview is filled with frequent questions from the guide and therefore forced into a mould self expression vanishes and so does reality." Precautions should therefore be taken to see that interview guide does not become too' much rigid, structured and over burdened with too many details. Importance of interview guide- Pauline Young has pointed out the following advantages of interview guide in an unstructured interview:

(i) It helps in securing a comparable data in the different interviews by the same and various interviewers. The general line of action to be taken and general topics to be discussed are predetermined thus making the whole interview standardized. The various interviews are thus conducted in similar ways and the results can easily be compared.

(ii) The same range of items are collected by each interviewer from different persons. No important aspect is left out.

(iii) Interviewer need not have undue reliance on his memory. While the narrative is in full swing and an emotional atmosphere has been created, there is every likelihood of the interviewer being swept away by it. At such times there is great danger of some important point being left out. The guide works as memory tickler in this respect and the interviewer may consult it from time to time to see that nothing has been left out.

(iv) It may help as a guide in the early stages of interview. When the field worker has interviewed sufficient cases he gets used to it; But in early periods he may have to consult the interview guide, off and on, to decide the correct line of action under, particular circumstances. As a matter of fact interview guide in must be fully' digested by the researcher and should not be consulted during the course of interview as far as possible. Frequent consultations may break the flow of the narration and divert the attention of the interviewee to it.

(3) Selection of Cases

After the general outline of the study has been planned and the interview guide prepared, the next problem is to select the cases to be interviewed. This may be done through any one of the various sampling methods discussed in the previous chapter. The cases selected .must be pertinent ones and available for interview. Their addresses must be available so that they may be contacted.

(4) Use of Panel

Supplying valid information to the interviewers is as technical as conducting interview itself. Thus, not only the interviewer, but also the interviewee should be trained in the work of interview. To avoid this difficulty a permanent panel of interviewers is formed. Whenever an enquiry of same nature is conducted, a fresh sample is generally not selected, but the same panel is approached for the purpose. In case of a repetitive type interview also, the panel is used and the same set of people is approached every time.

(5) Information about Interviewees

It is generally more convenient for the sake of interview to get some preliminary information about the interviewee, his general habits, sociability etc. This information helps the researcher to get armed in advance to face any unforeseen- circumstances due to peculiarity of nature of the information. It is also better to know his timings, so that he may be contacted at suitable time.

(6) Prior Appointment

It is sometimes useful that a prior appointment is taken from the interviewee regarding the time and place of interview. It is important in more than one respect. The interviewee knows that the researcher has valued his time and feels a sense of satisfaction. When the interviewer reaches his place he is not totally unexpected and the respondent is in a sense ready to receive him. When the interviewer suddenly breaks in, quite unannounced the respondent - may feel offended and run him down or at least ask him to come again. The interviewer may reach him at most inopportune time when the respondent is too busy and he may develop an antagonistic view for all times. Even when it is not so a lot of time is wasted in going to the same person over and over again. If previous engagement is made the researcher may plan his time accordingly and thus utilize his time in the best possible way without any waste. The appointment may be made either through a letter or on telephone if the respondent is available upon it.

3.6.4. Technique of Interview:

Conducting an interview is a technical matter and requires thorough knowledge of the methods & the principles underlying it. No definite rules can be set for the purpose but some guiding principles can definitely be formulated and may prove useful if properly and timely used. Following are the different steps to be taken in conducting an interview.

(1) Establishing Contact

The first step in the interview naturally is to establish with the interviewee. If previous appointment has not been taken it may be a problem to get a contact with the interviewee & make him agreeable to grant an interview. As soon as the respondent appears at the door, the interviewer has to greet him and introduce himself. At this time he should produce the letter of authority, which must be on the printed form of the research institution, and contain general outline, importance and purpose of study. A letter is generally always better than oral introduction as it carries more weight, and produces an impressive effect. Moreover, while the interviewee is busy reading the letter the research worker gets time to adjust himself to meet any questions from him.

When the respondent has read the letter of introduction, he may, if necessary, put some more queries about the research association or the problem under study. If he is finally convinced and has time he may ask the interviewer to get in and discuss what he wants to know. There is a general

tendency to enquire how the respondent's name has been chosen for interview and whether some of his neighbours are also being contacted. At such times the interviewer should explain to him the process of sampling, and the, name of the neighbours who have to be contacted, He should also explain to him how his own interview matters in the study of the problem and how the information supplied by him is going to be used.

At times the respondent may ask him to come again after sometimes telling him that he is too busy. At such time the interviewer must try to know whether the respondent is actually busy or simply avoiding him to get more time to think over the matter. He may explain more about the problem and try to remove any doubts that he thinks have caused him to return the interviewer. Any how he must fix up a time for the next visit and should be absolutely punctual in visiting his place. Various causes refusing an interview have been discussed in the last chapter on schedules. The reader is, therefore, referred to consult it in this connection.

(2) Starting an Interview

Once preliminaries have been completed and the respondent has, agreed to grant an interview, the actual interview starts. Beginning of the interview is of great importance as it has its effect upon the entire information supplied. If the respondent is prejudiced at the very start he, may not be, giving free & frank replies so essential for interview. A beginning may be made from the general discussion of the problem. In order to warm up the respondent the interviewer should let him do most of the talking while he should himself listen to it attentively guiding and directing the respondent about the subject matter wherever necessary. The problem may start from impersonal aspect and general discussion and later on be directed to personal experiences. Sometimes narration of his own experiences by the interviewer provide encouragement to the respondent to narrate his own experiences, but the interviewer must be cautious to keep his own narrative as short as possible- and not to , allow himself to be drawn into any discussion. It should also not show any inclination of the attitude or opinion of the interviewer on the subject. In no case the interviewer should disclose to him the experience narrated by another respondent. Even if asked for, he should...firmly tell him that such informations are kept perfectly confidential. This will have a good effect upon him, and encourage him to relate his own experiences. The beginning should always be of a general nature. Personal enquiries or controversial problems must be carefully avoided

(3) Securing rapport

According, to Goode and Hatt "a state of rapport exists between the interviewer and the respondent when the latter has accepted the research goals of the interviewer and actively seeks to help him in obtaining the necessary information." in the beginning of the interview every interviewee proceeds very cautiously giving only formal information, but if the researcher is tactful and expert in interview technique, he will soon create the friendly atmosphere and gain the confidence of the respondent. No

other device, but the researcher's own common sense, skill and personality can produce this state.

One point must be remembered at this stage. There is a general feeling that people mostly do not like discussing their personal matters with others and therefore the interviewer himself always feels uneasy. He feels like an unwanted, unwelcome person who is unnecessary poking his nose in somebody else's affairs. The uneasiness of the researcher himself is the greatest stumbling block, in the achievement of rapport. In fact the reality is entirely different: A secret is the most disturbing factor, for any human being and by nature he wants to share it with others. The only difficulty is of finding a right person who may be intelligent enough to appreciate it, felleable enough to-keep the confidence and not to use it against the respondent in any way and above all take even the weaknesses of the respondent in the normal course and not to slight or look down upon him because of them.

In most cases the hesitation of a person is born of a false sense of morals. Thus; for example, the development of sex feeling in a youth in India is not considered as a normal thing and any young man may feel shy to discuss his own feelings frankly. If he is told that there is nothing new with him, and that everyone had that sort of feelings in his life including the researcher himself and on the other hand it would be more abnormal if he did not have those feelings rather than if he had them, the respondent will gain confidence and overcome his first effect of hesitation Or shyness. Once the state of rapport is reached between the two, the respondent is over zealous to tell everything that he knows, all that he feels without any attempt at secrecy or formality. A clever research worker must utilize this situation to the fullest advantage and use it as best as he can. He must know that this state of rapport generally does not last long and once the respondent has relapsed into his former state, it is very difficult to bring him back to rapport.

(4) Recall

At times during the course of interview respondent is so full of emotional feelings that he drifts away from the main interview. Then when that narration has come to an end he generally lapses into silence. At such a time the researcher should wait for some time, waiting eagerly for him to continue again. When he has not started for sometime he must refresh his memory, by pointing out what he had been saying in the last discussion.

(5) Probe questions

There are occasions in the interview when the interviewer unknowingly or deliberately ha's side tracked some important aspect of the problem. At some times the researcher has to be very cautious to catch those slips. When the respondent has paused after finishing that part, the interviewer must draw his attention again to that fact telling him- "You had been just telling me about. Would you tell me more about it? It is really so very interesting."

Great care should be taken in putting the probe questions. They should appear to the respondent to be born of mere curiosity and a natural course. If the respondent has deliberately side tracked them, a very shrewd effect is needed to make him discuss it at length. If he at all gets any suspicion that the researcher cleverly wants to get at some of his secret, which he need not disclose, the rapport is easily lost and remaining information is covered with formality. It is, therefore, advisable that if the probe question also has failed to have proper response and the respondent still feels reluctant to discuss it, the interviewer should not pursue the point. He should drop it informing the respondent that he did not think it was so confidential and any way if it was so they would drop it and proceed on. On such an assurance it is most probable that the respondent would willingly discuss the matter.

(6) Encouragement

The respondent has to be encouraged from time to time during the course of interview to narrate his feelings. Such complementary expressions as wait you have said are really very illuminating. I never had such an enlightening discussion. You really have a very unique approach to the problem: How strange, I myself had never thought it from that angle etc. A great care should be taken that such remarks sound as true appreciations and not as mere flattery, otherwise they lose all their effect.

The respondent gets encouraged when the researcher seeks his advice, notes it down, saying that it is really very valuable one. The attention of the interviewer, his appreciation and active participation in the discussion encourage the respondent to say more. If he understands, that the researcher has followed his point in the right sense, he is generally encouraged to say more about it. That is why the interviewer should not be a mere passive listener but an active participant in the discussion:

(7) Guiding the Interview

The interviewer has a very delicate duty perform in case of a narrative type interview. While he should enter fully into the spirit of the narrative with full appreciation and complete participation, he must be cautious not to get completely lost into it. He must maintain a detached view at the same time and skillfully guide the course of interview while it is drifting apart. It has generally been found that in the moment of emotional out-bursts the respondent is so absorbed that he drags the story to a point which is not of much importance to the study. At such times it is the duty of the interviewer to guide him to the right path.

Guiding an interview is a delicate task. If the respondent is stopped from telling what he considers to be the most important item and which he is most eager to relate, he is very likely to feel offended and thus lose his rappings. The interviewer has, therefore, to drift the course very skillfully. He must be patient enough to hear even the most irrelevant talk if he wants to have relevant portions from him. He must look to the liking and taste of the respondent rather than to his own. The only care that he has to take is that no important point should be left out from discussion.

(8) Recording

When the interview is free story type it is a problem to record it. In fact recording should be reduced to the minimum. When the interviewer begins to record the statement, the flow of the conversation is lost and the interview takes the form of questions and answers. Nobody can be expected to go on with his narration while the other party is busy in something else, rather than listening to him. Generally when the interviewer begins to note the respondent slows down his pace and the flow is lost. Besides, when he is conscious that his statement is being recorded the free flow and objectivity is lost and undue caution overtakes him.

Recording during the course of interview should be avoided as far as possible. But undue reliance should also not be placed on one's own memory. The interviewer should therefore jot down the points, particularly any figures if they are given in the course of statement. The knowledge of short-hand is useful in this respect: If he does not know short hand he should develop a scheme of abbreviations, and record the important points in abbreviated form. Tape recorders have at times been used successfully, but they do create a feeling of over-cautiousness in the mind of the narrator and more formal answers are given. Such devices should, therefore, be avoided in delicate interviews:

(9) Closing the interview

How should the interview be closed, It should never be ended abruptly. After the respondent has narrated everything he wanted to, the tempo of his narration generally slows down. Occasionally he may relapse into silence, which continues to grow longer and longer as the interview gradually bends to come to an end. The interviewer should closely watch such a situation and give a natural end to the discussion. It has generally been found that when rapport has gradually subsided the respondent is overtaken by a feeling of self-remorse and awe. He begins to feel that he has given too much of his secrets to a stranger. Such a feeling although a criterion of a successful interview should be cautiously removed if possible.

It is generally useful to review the important points discussed before closing the interview. The interviewer may repeat the more important items and thus bring a natural close to the interview.

(10) Report

When the interviewer has come home after interview he should immediately settle to write down what he has discussed. The writing of report should never be postponed at any cost. The various narratives, moods and expressions are vividly clear in the mind of the interviewer at this time and if sufficient time is allowed to pass, he may forget a great part of it. The report should also be as vivid and graphic as possible, so that it may be able to create the same intensity of feelings at some later date. The interviewer's power of writing, his command over the language is a great help in this respect.

3.6.5. Limitations of Interview:

Interview although widely accepted as a method of social research has following limitations:

1. The validity of data collected through interview is always of a doubtful character. There are a large number of sources of bias that may invalidate the information collected: Control devised for checking the creation of bias has not been found to be adequate so far. The various sources of bias have been described earlier.
2. It is a difficult task to make a person agreeable for interview. If the subject of interview concerns only the common matters of life, much difficulty may not be experienced in securing interview but if study of more intimate and personal matters required it may be very hard to make them agree to disclose the secrets of their personal life. The difficulty is still more increased when the event under study is connected with emotional aspect also. As for example the study of causes leading to divorce and its after effects.
3. Conducting an interview requires a specialized knowledge of highest order. The interviewer must be an expert of human psychology and human behaviour. He must possess a very forceful personality to prevent the interviewee from telling a lie exaggerating facts. The field workers who are employed for the purpose hardly possess these great qualities. The result is that a lot of unreliable and invalid data is collected.
4. Interview method has a lot of subjectivity in it. What the interviewee says largely depends upon the fact as to whom he says. Thus if the same person were to be interviewed by different persons his information is most likely to show material variation.
5. Interview leaves the researcher at the mercy of the respondent. There is no source of direct observation or verification of what the respondent says.
6. Qualitative type interviews are sufficiently influenced by emotions and sentiments. They are not sufficiently standardised and do not provide scope for empirical verification.

3.6.6. Importance of Interview:

Interview has proved to be an important method of social research. Some of the social scientists are of the opinion that social phenomena is unfit for statistical analysis and the qualitative interview is the best method of gaining knowledge of the phenomena under study. Following are, however, the main points of importance.

1. Interview enables us to know and study even those events that are not open to observation, and which are known to nobody else except the respondent himself. It may be pointed out that most of the social activities are of this nature and therefore, interview provides the best method of social study.
2. It is the only method of studying an abstract and intangible personal factor like attitude, feelings, reactions etc. These factors cannot be observed although they play a very important part in guiding our activities.

No social study is complete unless we have known the influences of various phenomena upon these factors. It is only the respondent who knows what has been the effect of particular event upon him and interview is the only method of extracting this information from him.

3. Interview enables us to study an event in its emotional and historical background, and it is only in these backgrounds that the real significance of an event can be followed. Most of our activities are governed by our emotions and feelings and the circumstances affecting them have an important bearing upon their occurrence. The narrative type interview enables the interviewer to view things from respondent's point of view.

4. The best person to narrate any event is the person who has been personally involved in it. An outside observer can hardly do so with the same depth of feelings. The description given by an interviewee is definitely more complete from every point of view.

5. The information gathered through interviews has been found to be fairly reliable. If proper controls are exercised, the interviewer is good and expert, the data secured through interview can be used for sufficiently valid generalizations.

6. Through interview method it is possible to study, even the past phenomena. For observation purpose it is essential that the event must take place before the eyes of the observer himself. The social occurrences being so uncertain in nature, present a great difficulty in being personally observed. This type of difficulty is totally eliminated in Case of interview.

3.7. Case study:

Case study is an intensive study of a case which may be an individual, an institution, a system, a community, an organisation, an event, or even the entire culture. Yin (1991:23) has defined case study as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, when the boundaries between phenomenon and context are not clearly evident, and in which multiple sources of evidence are used". Kromrey (1986:320) holds that "case study involves studying individual cases, often in their natural environment and for a long period of time". It is, thus, a kind of research design which usually involves the qualitative method of selecting the source of data. It presents the holistic account that offers insights into the case under study. When attention is focused on the development of the case, it is called 'case history'. For example, how a particular boy became a juvenile delinquent because of lack of parental control, impact of peers, lack of attention by teachers, and money earned through cheap means, and then became an adolescent thief and a sex criminal and ultimately a professional pickpocket is tracing criminality through case history method.

Case study is not a method of data collection; rather it is a re-search strategy, or an empirical inquiry that investigates a contemporary phenomenon by using multiple sources of evidence. Yin (1989:24) and Hammersley (1992) both have supported this view, as for the definition of case study is concerned. Mitchell (1983:192) has also maintained that a

case study is not just a narrative account of an event or a series of events but it involves analysis against an appropriate theoretical framework or in support of theoretical conclusions. Case study can be simple and specific, such as "Ram, the delinquent boy", or complex and abstract, such as "decision-making in a university". But whatever the subject, to qualify as a case study, it must be a bounded system/unit, an entity in itself.

Some writers like Bell (1993) and Blaxter (1996) have suggested that case studies are suitable for single person research on a limited budget and that the study of one case provides a manageable opportunity for the researcher to study one aspect of the problem in some depth within a limited time. But this is not true. Case studies have been used for various purposes—descriptive, exploratory and explanatory research—and also to generate theory (Yin, 1989; Gummesson, 1991). Case studies are used not only in social sciences like sociology (community studies), social anthropology (tribal culture), political science (policy research), public administration (management and organisational studies) but also in medicine (clinical research) and social work (helping professions). While a case study can be either quantitative or qualitative, or even a combination of both, but-most case studies lie within the realm of qualitative methodology. It is the preferred strategy when "how, who, why and what" questions are being asked or when the focus is on a contemporary phenomenon within a real-life context.

3.7.1. Characteristics and Principles of Case study:

Characteristics:

Hartfield (1982) (also see, Sarantakos, 1998:192) has referred to the following distinguishing characteristics of case study:

- It studies whole units in their totality and not some selected aspects or variables of these units.
- It employs several methods in data collection to prevent errors and distortions.
- It often studies a single unit: one unit is one study. It perceives the respondent as a knowledgeable person, not just as a source of data.
- It studies a typical case.

Principles:

The principles of case study are:

1. Use multiple sources: Use of one source of data collection does not give adequate evidence for generalization. But getting information from several sources (like interviewing, observing, analyzing documents) is regarded as the major strength of the case study approach, because it also contributes to improving the reliability and validity of the findings.
2. Maintain a chain of evidence: The evidence from which conclusions are drawn in the case study has not only to be stated and specific cases cited like criminological investigation in a crime case in the court but it is also to be preserved for some time so that the evaluators should be able to verify the source and evidence.

3. Record data: The data may be recorded either in the form of sketchy notes in observation and interviews or it may be tape-re-corded in minute details. If a few notes are taken at the time of interview/observation, full notes may be written later on as soon as possible.

3.7.2. Purposes of Case study:

Burns (2000:460-61) has pointed out the following purposes of a case study:

1. To use it as a preliminary to major investigation as it may bring to light variables, processes and relationships that deserve more intensive investigation. In this sense, it may even be a source of hypotheses for future research.
2. To probe the phenomenon deeply and analyze it intensively with a view to establishing generalizations about the wider population to which the unit belongs.
3. To get anecdotal evidence that illustrates more general findings.
4. To refute a universal generalization. A single case can represent a significant contribution to theory building and assist in focusing the direction of future investigations in the area.
5. To use it as a unique, typical and an interesting case in its own right.

According to Berger et al (1989), reasons for employing case study method can be:

- to get intimate and detailed information about the structure, process and complexity of the research object,
- to formulate hypotheses,
- to conceptualise, to operationalise variables,
- to expand quantitative findings, and
- to test the feasibility of the quantitative study.

3.7.3. Types of Case studies:

Burns (2000) has stated six types of case studies:

- 1. Historical case studies:** These studies trace the development of an organization/system over time. The study of an adult criminal right from his childhood through adolescence and youth is an ex-ample of this type of case study. This type depends more on interviews, recording and documents.
- 2. Observational case studies:** These focus on observing a drunkard, a teacher, a student, a union leader, some activity, event, or a specific group of people. However, the researchers in this type of study are rarely total participants or total observers.
- 3. Oral history case studies:** These are usually first person narratives that the researcher collects using extensive interviewing of a single individual. For example, the case of a drug addict or an alcoholic, or a prostitute or a retired person who fails to adjust himself in son's family. The use of this approach depends more on the nature and cooperation of the respondent.

4. Situational case studies: This form studies particular events. The views of all participants in the event are sought. For example, a communal riot: how it started with conflict between two persons of two different religious groups, how each person sought support of persons of his own religion present at the spot, how police was informed, how police arrested persons of one particular religious group, how power elite interfered and pressurized the police department, how did public and the media react, and so on. Pulling all these views together, a depth is provided that contributes significantly to the understanding of the event.

5. Clinical case studies: This approach aims-at-understanding in depth a particular individual such as a patient in the hospital, a prisoner in the jail, a woman in a rescue home, a problem child in a school, etc. These studies involve detailed interviews, observation, going through records and reports, and so on.

6. Multi-case studies: It is a collection of case studies or a form of replication, i.e., multiple experiments. For example, we can take three case studies and analyse them on replication logic. This logic is that each case will either produce contrary results or similar results. The outcome will demonstrate either support for the initial propositions or a need to revise and retest with another set of cases. The advantage of multi-case design is that the evidence can be more compelling. However, this approach requires more time and effort.

Eckstein (1975) has classified case studies into five groups on the basis of their different uses:

1. Configurative/ideographic case study: This case study uses descriptions to provide understanding. The configurative element provides the overall outline of the unit under investigation. The ideographic element either allows facts to speak for them or for intuitive interpretation. The intensity of such studies claims validity. The major weakness of this type of case study is that the understanding produced by such study cannot be used to generate theory. In fact, they are not designed for this purpose.

2. Disciplined-comparative case study: In this type, each case is viewed in the context of an established or a provisional theory. Ideally, the findings of a particular case study should be able to be de-ducted from such a theory or could be used to challenge it. For example, the case study of a criminal to be interpreted, on the basis of Sutherland's theory of causes of crime, that the specific criminal became a criminal by associating with criminals and learning from them the methods of committing crime.

3. Heuristic case study: This type of case study stimulates theoretical thinking. Such studies, unlike configurative-ideographic case studies, are used for theory building and therefore are less concerned with overall descriptions of individuals, events, etc. Rather these are concerned with generalisable relations. But heuristic case study does not guarantee a theoretical outcome.

4. Plausibility probes case study: This type of case study is used in the intermediate stage between the development of a theory and the testing of that theory. This case study attempts to establish whether a theoretical construct is worth considering at all.

5. Crucial case study: This case study is designed to challenge an existing theory.

3.7.4. Sources of Data collection for Case studies:

Two main sources of primary data collection are interviews and observation, while the secondary data are collected through a variety of sources like reports, records, newspapers, magazines, books, files, diaries, etc. The secondary sources may not be accurate or may be biased. But they specify events and issues in greater detail than interviews can.

Most commonly, it is the unstructured interview which is used by the investigators. The questions are usually open-ended with a conversational tone. However, at times, the structured interview is also used as part of a case study.

The observation method used could either be participant or non-participant (already discussed in chapter 10). The latter has been used more by sociologists in India like M.N. Srinivas, Sachchidananda, L.P. Vidyarthi, etc. For some topics, the non-participant observation is more suitable. Both these methods give opportunity to the investigator to perceive reality from the viewpoint of an outsider, e.g., observation of husband-wife conflicts in a family, students' behaviour in a classroom, workers' behaviour in a trade union meeting, clerks' behaviour in an office, and the like. Such observations can range from casual to formal.

In collecting data from different sources, the investigator must have the following skills:

- He should be able to formulate precise and relevant questions to extract full information from the respondents. Sometimes, the un-expected responses prompt the investigation to dig deeper.
- He should be a good listener, i.e., he should pay attention to all clues, moods and words used.
- He should be flexible and adaptive because data collection does not always proceed exactly as planned. Even the focus of inquiry can change a little.
- He should try to grasp the responses in the context of the respondent's perspective. Sometimes, the responses may be at variance with one another and lead to the need for more evidence.
- He should not have any bias in recording information or in analysing it.

3.7.5. Difference between Case study and Survey method:

Following Black and Champion (1976:93-94), we may give difference between survey and case study by an illustration as under:

Planning the Case study

The research design of a case study involves four components:

1. Designing initial questions: These pertain to who, what, where, when and how. For example, the case study of a drug addict focuses on questions like what types of drugs are taken, how often these are taken, when was

initial step made in starting taking drug, what are the sources of getting drugs, how much money is spent on drugs in a day/week/month, and so on.

2. Study proposition: While the initial questions are general, specific questions need to be asked for seeking specific evidence. In the above example, the specific questions could be: in last one week, what drug(s) were taken by the addict, from whom did he obtain drugs, from where did he get money for purchasing drugs, and so on.

3. Unit of analysis: This is concerned with defining the actual 'case', i.e., the person, the event, and the system that is to be studied. For example, in above case, we may identify the drug addicts in a particular college/university and restrict the study to these students only. As another example, we may concentrate on the women employees of a particular organisation for studying the dual role performance and adjustment of working women. This way, the researcher is bounded and will not be tempted to collect data from persons randomly selected. Many researches have confused a case study of an organisation with a case study of a small group. In the above example, the study is of a small group (of working women) and not an organisation (say, secretariat, factory, etc.). Once the case has been established, other units of analysis become apparent. If the unit is a group, the persons to be included in the group must be established.

4. Linking data to propositions and criteria for interpreting findings. This component relates to data analysis step.

3.7.6. Uses or Advantages of Case study:

Some advantages of case study (Black and Champion, 1976:91-92) are as follows:

- It makes in-depth study possible.
- It is flexible with respect to using methods for collecting data, e.g., questionnaire, interview, observation, etc.
- It could be used for studying any dimension of the topic, i.e., it could study one specific aspect and may not include other aspects.
- It can be conducted in practically any kind of social setting.
- Case studies are inexpensive. Yin (1989) has referred to following three uses of single case study:
 - It provides a critical test of a theory to corroborate, challenge or extend it.
 - It helps in studying a unique case which is useful not only in clinical psychology but also in sociology for the study of deviant groups, problem individuals, and so on. It helps in studying the phenomenon that occurs in a situation where it (the phenomenon) has not been studied before, e.g., studying the problems and rehabilitation of the sufferers of cyclones in the coastal areas (sociology of disaster), management of irrigation canals for the farmers, environment disasters, etc.

Against the single case study, there are multiple case studies where a series of cases are studied for testing a well-developed theory. How many cases should be included in a multiple case design will depend on the nature of the problem under study and the conditions in which it occurs.

3.7.7. Criticisms of Case studies:

Case study method is generally criticized on the following basis:

1. Subjective bias: The case study design is regarded with disdain because of investigator's subjectivity in collecting data for supporting or refuting a particular explanation. Many a time the investigator allows personal views to influence the direction of the findings and his conclusions. The external checks on the investigator are so weak that he does not miss opportunity to advance personal views.

2. Little evidence for scientific generalizations: It is said that case study provides little evidence for inferences and generalizing theory. The common complaint is: How can generalization be made from a single case? Robert Burn's (2000:474) answer to this question is: The case studies are generalisable to theoretical propositions, not to statistical populations. The object of case study is to expand theory and not to undertake statistical generalization. It may also be said that if the uniformity of nature is assumed, the objection (of generalising on the basis of a single case) disappears as one case will demonstrate what is true of all other cases of the same category. This assumption is accepted in natural sciences too. We can take an illustration from social sciences, say criminology. The example is of thieves who commit minor thefts for the first time due to poverty, hunger, unemployment, chronic illness, etc., or, in short, due to 'economic compulsions'. If a criminologist wants to establish association between crime and economic deprivations and tries to propound a hypothesis or a theory, could it be said that the inference is uncertain? Suppose later on different re-searchers take different cases of thefts defined by three variables, namely, minor theft, economic deprivation, opportunity structure, and then separate studies are compared and general conclusions drawn in terms of the poverty. Such case studies will represent categories and illustrate findings.

3. Time-consuming: Case study is time-consuming as it practices a lot of information which is difficult to analyze adequately. Selectivity has naturally a tendency to be biased. But if the case study is focused on relevant issues of person or event under study, it need not be lengthy.

4. Doubtful reliability: It is very difficult to establish reliability in the case study. The investigator cannot prove his authenticity for obtaining data or having no bias in analyzing them. It is not easy to fix steps and procedures explicitly to the extent that others are enabled to replicate the same study.

5. Missing validity: The investigators in the case study fail to develop a sufficiently operational set of measures. As such, checks and balances of reliable instruments are found missing. For investigator, what seems true is more important than what is true. The case study can oversimplify or exaggerate leading to erroneous conclusions. The validity question also arises because the investigator by his presence and actions affects the behaviour of the observed but he does not give importance to this reaction while interpreting the facts.

6. Yet one more argument against the case study is that it has no representativeness, i.e., each case studied does not represent other similar cases.

Check Your Progress III

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

1) Describe different process of observation?

Ans.

2) What are the types of observation?

Ans.

3) Mention different kinds of schedule in detail?

Ans.

4) What are the advantages of questionnaire method?

Ans.

5) Describe about different kinds of interview?

Ans.

3.8. Let Us Sum Up:

This unit describes about the choice of tools to be used in the collection of data is a crucial decision. Broadly speaking, the nature of the research problem, the type of research design, the type of respondents and their geographical distribution, the professional competence of investigators available for collecting data, the period within which the study is to be completed and the funds available determine the tools to be selected for the collection of data.

We considered the features of each of the five tools most frequently used for data collection, viz., Observation, Interview, Case Study, Schedule and Questionnaire. We discussed their respective strengths and weaknesses. We found that even though the schedule is the most widely used tool for data collection, a judicious use of other tools to supplement the data collected through the schedule enriches the quality of the information that is obtained. In some types of research studies, however, the primary dependence has to be on one or the other methods of data collection. The use of tools requires much expertise which can be acquired not just by reading books but by actual experience acquired through the use of these tools.

3.9. Key Words:

- **Natural Observation:** Natural Observation occurs when we observe behaviour as it is taking place in a normal setting, e.g., watching children while they select toys. In this type of Observation no attempt is made to manipulate the field of study or behaviour of the observed.
- **Controlled Observation:** When observation takes place according to definite prearranged plans, involving experimental procedure, it is called controlled observation. This method affords greater precision and objective and can be repeatedly observed under identical conditions.
- **Unstructured Interview:** It is known as uncontrolled, unguided or undirected interview. No direct or predetermined questions are used in this type of interview. The field worker may be told certain broad topics upon which the information is to be collected. It is generally held in form of free discussion or story type narrative.
- **Case study:** is an intensive study of a case which may be an individual, an institution, a system, a community, an organisation, an event, or even the entire culture.
- **Clinical case studies:** This approach aims-at-understanding in depth a particular individual such as a patient in the hospital, a prisoner in the jail, a woman in a rescue home, a problem child in a school, etc. These studies involve detailed interviews, observation, going through records and reports, and so on.

3.10. References:

1. Goode, W.J. and Hatt, P.K. (1952) *Methods in Social Research*, McGraw Hill, London.
2. Jahoda, M., Merton D. and Stuart, W.C.(1951) *Research Methods in Social Relations*, Dryden, New York.
3. Young, P.V. and Schmid, C.F. (1977) *Scientific Social Surveys and Research*, Prentice-Hall: New Delhi.

3.3. Check Your Progress – Possible Answers:

Check Your Progress I

1. Types of Data:
 - i) Primary Data
 - ii) Secondary data

2. Objectives of Sampling:
 - i) Underlying homogeneity amidst complexity
 - ii) Possibility of representative selection
 - iii) Absolute accuracy not essential

Check Your Progress II

1. Non-probability sampling:
 - i) Purposive sampling
 - ii) quota sample
 - iii) convenience sampling

2. Kinds of Stratified Sampling:
 - (i) Proportional stratified sample
 - (ii) Disproportional stratified sample
 - (iii) Stratified weighted sampling

3. Quota sampling is a special type of stratified sampling. According to this method the universe is first divided into different strata. Then the number to be selected from each stratum is decided. This number is known as the quota.

4. Under this method, the total population is divided into some recognizable sub-divisions which are termed as clusters and a simple random sample of these clusters is drawn and then the survey of each and every unit in the selected cluster is made.

Check Your Progress III

- 1. Process of Observation:**
 - i) Preparation and training
 - ii) Entry into the study environment
 - iii) Initial interactions
 - iv) Observation and recording
 - v) Termination of field work

- 2. Types of Observation :**
 - i) Natural vs. Contrived Observation
 - ii) Participant Observation (P.O)
 - iii) Non-participant Observation (NPO)
 - iv) Controlled Observation (C.O.)
 - v) Non-controlled Observation
 - vi) Direct Observation (DO):
 - vii) Indirect Observation (IO)
 - viii) Overt and Covert Observation
 - ix) Structured and Unstructured Observation

- 3. Kinds of Schedules:**
 - i) Observation Schedules
 - ii) Interview Schedules
 - iii) Document Schedules
 - iv) Rating Schedules

- 4. Advantages of Questionnaire method:**
 - i) Low cost
 - ii) Large coverage
 - iii) Repetitive information
 - iv) Rapidity
 - v) Greater validity

- 5. Kinds of Interviews:**
 - i) Structured interview
 - ii) Unstructured interview
 - iii) Focused interview
 - iv) Repetitive interview