

METHODS OF DATA COLLECTION

These are procedures used to collect your data: Here you explain how you are going to administer your instruments. Either your own or employ some researcher systems. Research instruments are the tool, device or method used in collecting of information in a systematic way. Some of the instruments are:

- Questionnaires
- Interviews
- Schedules
- Observation Techniques
- Rating Scales

1. Questionnaire:

It is list of questions related to one topic. It may be defined as; “A questionnaire is a systematic compilation of questions that are submitted to a sampling of population from which information is desired.”

Characteristics of a Good Questionnaire:

1. It deals with an important or significant topic.
2. Its significance is carefully stated on the questionnaire itself or on its covering letter.
3. It seeks only that data which cannot be obtained from the resources like books, reports and records.
4. It is as short as possible, only long enough to get the essential data.
5. It is attractive in appearance, neatly arranged and clearly duplicated or printed.
6. Directions are clear and complete, important terms are clarified.
7. The questions are objective, with no clues, hints or suggestions.
8. Questions are presented in a order from simple to complex.
9. Double negatives, adverbs and descriptive adjectives are avoided.
10. Double barreled questions or putting two questions in one question are also avoided.

11. The questions carry adequate number of alternatives.
12. It is easy to tabulate, summarize and interpret.

Merits of Questionnaire Method:

1. it's very economical.
2. It's a time saving process.
3. It covers the research in wide area.
4. It's very suitable for special type of responses.
5. It is most reliable in special cases.

Demerits of Questionnaire Method:

1. Through this we get only limited responses.
2. Lack of personal contact.
3. Greater possibility of wrong answers.
4. Chances of receiving incomplete response are more.
5. Sometimes answers may be illegible.
6. It may be useless in many problems.

2. The Interview:

Interview is a two way method which permits an exchange of ideas and information.

Difference between Interview and Questionnaire

Questionnaire Method	Interview Method
<ol style="list-style-type: none"> 1. Data is gathered indirectly. 2. No face to face contact between two. 3. Interviewer should have the general knowledge of the topic. 4. Interviewee will hesitate to write it. 5. We get written information only. 	<ol style="list-style-type: none"> 1. Data is gathered directly. 2. There is face to face contact between Interviewer and interviewee. 3. Skillful interviewer is needed. 4. Some confidential information can also be obtained.

	5. We get written and oral both type of information
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Characteristics of an Interview:

1. The interviewer can probe into casual factors, determine attitudes, discover the origin of problem
2. Its appropriate to deal with young children and illiterates person.
3. It can make cross questioning possible.
4. It helps the investigator to gain an impression of the person concerned.
5. It can deal with delicate, confidential and even intimate topics.
6. It has flexibility.
7. Sincerity, frankness, truthfulness and insight of the interviewee can be better judged through cross questioning.
8. It gives no chance for respondent to modify his earlier answer.
9. It is applicable in survey method, but it is also applicable in historical, experimental, case studies and clinical studies.

Merits of Interview:

1. Direct research.
2. Deep research
3. Knowledge of past and future.
4. Knowledge of special features.
5. Mutual encouragement is possible.
6. Supra-observation is possible.

7. Knowledge of historical and emotional causes.
8. Examination of known data.

Disadvantage of Interview:

1. May provides misleading information.
2. Defects due to interviewee (low level of intelligence or may be emotionally unbalanced)
3. Result may be affected due to prejudices of interviewer.
4. Result may be affected due to the difference in the mental outlook of interviewee and interviewer.
5. One sided and incomplete research.

3. Schedule:

When a researcher is using a set of questionnaires for interview purpose it is known as schedule.

Important Features of Schedule:

1. The schedule is presented by the interviewer. The questions are asked and the answers are noted down by him.
2. The list of questions is a mere formal document, it need not be attractive.
3. The schedule can be used in a very narrow sphere of social research.
4. It aids to delimit the scope of the study and to concentrate on the circumscribed elements essential to the analysis.
5. It aims at delimiting the subject.
6. In the schedule the list of questions is preplanned and noted down formally and the interviewer is always armed with the formal document detailing the questions.

Thus interviewer not to depend upon the memory.

Points to be kept in mind while designing schedule;

7. Interviewer should not frame long, complex, defective questions.
8. Unrelated and unnecessary questions should not be asked
9. Schedule should not contain personal and upsetting questions.
10. Its questions should be simple, clear and relevant to topic.

11. Questions be suitable to respondent's intelligence level.
12. Impersonal, indirect and unambiguous questions should be included in schedule.

Merits of Schedule:

1. Higher percentage of responses.
2. Possible to observe personality factors.
3. Through interview personal contact is possible.
4. It is possible to give human touch to schedule.
5. Removal of doubts is possible because face to face interaction is there.
6. It is possible to know about the defects of the interviewee.

4. Observation Technique:

This is most commonly used technique of evaluation research. It is used for evaluating cognitive and non-cognitive aspects of a person. It is used in evaluation performance, interests, attitudes, values towards their life problems and situations. It is most useful technique for evaluating the behaviors of children.

Characteristics of Observation Schedule:

1. It serves a formulated research purpose.
 2. It is planned systematically rather than occurring haphazardly
- It is systematically recorded and related to more general propositions.
4. It is subjected to checks and controls with respect to validity , reliability and precision.
 5. It is a direct technique to study an object, an event or a problem.
 6. It is based mainly on visual –audio scene.
 7. It employs own experiences.
 8. It establishes cause-effect relationship.
 9. It is an objective technique of data collection.
 10. It is both objective and subjective evaluation technique.

11. It is formal as well as informal technique.
12. It is quantitative as well as qualitative technique for data collection.

Advantages:

1. It is reliable and valid technique of collecting data and information.
2. We get first hand data through this method.
3. Record of observation is also available immediately.
4. It is simple, broad and comprehensive method.
5. It is an oldest technique of data collection and getting direct information.

Limitations:

1. It has a limited scope for its use because all the events cannot be observed directly.
2. It is subjective method.
3. It is very time consuming process.
4. Costly so energy consuming also.
5. Presence of observer influences the behavior of the person i.e. subject becomes conscious.
6. In case covert behavior, which can't be observed, it is not useful.
7. Observer should be trained and experienced

5. Rating Scale:

Rating is term applied to express opinion or judgment regarding some situation, object or character. Opinions are usually expressed on a scale of values; rating techniques are devices by which such judgments may be quantified.

Advantages:

1. Writing reports
4. Making recommendations to employers.
5. Supplementing other sources of under taking
6. Stimulating effect upon the rates.

Limitations:

1. Difference in rating abilities.
2. Difference in reliability as subjects for rating.
3. Agreement among raters of one type of contact only.
4. Average superior than single.
5. Impact of emotions.
6. Limits of self-rating.
7. Over rating.
8. Limits of rating of specific qualities.
9. Limits of justifications

Collecting Primary Data and Secondary Data:

The primary data can be collected through laboratory measurement, field observation, questionnaires, interviews, opinionnaires, schedules etc.

The secondary data can be collected from technical publications such as manuals, handbooks, data sheets, and standards, books and journals, official publications of the Central government, state governments, local bodies, private data services and computer database.

Basis of comparison	Primary data	Secondary data
Meaning	Primary data refers to the first hand data gathered by the researcher himself.	Secondary data means data collected by someone else earlier.
Data	Real time data	Past data
Process	Very involved	Quick and easy
Source	Surveys, observations, experiments, questionnaire, personal interview, etc.	Government publications, websites, books, journal articles, internal records etc.
Cost effectiveness	Expensive	Economical
Collection time	Long	Short
Specific	Always specific to the researcher's needs.	May or may not be specific to the researcher's need.
Available in	Crude form	Refined form
Accuracy and Reliability	More	Relatively less

