

Data Collection

Data Collection is an important aspect of any type of research study. Inaccurate data collection can impact the results of a study and ultimately lead to invalid results. Data collection methods/tools are decided according to nature and scope of the research study. Different methods or tools are applied during data collection for quantitative and qualitative studies. Some researches require fresh and first hand information which is known as primary data. In some cases, the collected and analysed data is included for further analysis and discussion which is secondary data. Both kinds of data are very important depending on research problem. As far as data collection tools are concerned, the most common tools are:

- Questionnaire
- Interview
- Focus Group Discussion
- Observation

Questionnaire

This method of data collection is very popular especially when information is to be collected from large number of people. A questionnaire is simply a ‘tool’ for collecting and recording information about a particular issue of interest. It is mainly made up of a list of questions, but should also include clear instructions and space for answers or administrative details. Questionnaires should always have a definite purpose that is related to the objectives of the research, and it needs to be clear from the outset how the findings will be used.

A questionnaire is defined as

‘a document containing questions and other types of items designed to seek information appropriate to analysis’ (Babbie, 1990:377).

‘A questionnaire comprises of series of questions asked from the respondents in order to investigate any phenomenon, situation, fact or figures’.

Questionnaire is equally used in survey research, experiments and other modes of research. Data can be collected relatively quickly because the researcher would not need to be present when the questionnaires were completed. Questionnaires can be an effective means of measuring the

behaviour, attitudes, preferences, opinions and intentions of large numbers of people more cheaply and quickly than other methods.

Questionnaires can be used in different ways, for example postal, electronic, face-to-face and telephone. Postal and electronic questionnaires are known as self-completion questionnaires. Respondents complete them by themselves in their own time. Face-to-face and telephone questionnaires are used by interviewers to ask a standard set of questions and record the responses that people give them. Questionnaires that are used by interviewers in this way are sometimes known as interview schedules. As a general rule questionnaires should be as simple as possible, collect only needed information and be valid.

Types of Questionnaire

There are roughly two types of questionnaires, structured and unstructured. A mixture of these both is the quasi-structured questionnaire that is used mostly in social science research. Literatures show close ended as structured and open ended as unstructured ones. Close-ended questions allow a limited number of answers, leaving no space for additional information to be added. They require only recognition and a choice from among answer options. Advantages of close-ended questions are greater correctness, uniformity, easier recall for the respondent, easier coding and easier analysis than open-ended questions. Example of close-ended question could be:

Do you take any of the following drinks in daily routine?

Mineral Water? Yes/No/Don't know

Juice? Yes/No/Don't know

Tea? Yes/No/Don't know

Cola? Yes/No/Don't know

Advantages of close-ended questions are:

- Close-ended questionnaires can provide large amounts of research data for relatively low costs.
- The data can be quickly obtained as closed questions are easy to answer.
- The questions are standardised. All respondents are asked exactly the same questions in the same order.

Close-ended questions lack detail because the respondents are unable to give details about any query.

Open-ended questions are not pre-categorized and they gather more information. Open questions allow people to express what they think in their own words. Open-ended questions enable the respondent to answer in as much detail as he likes in her own words. Open ended questions provide a rich source of qualitative information (i.e. more descriptive than numerical) as there is no restriction to the response. However, they are harder to analyse. If you want to gather more in-depth answers from your respondents, then open questions will work better. Open questions are often used for complex questions that cannot be answered in a few simple categories but require more detail and discussion. For example:

Can you tell me how happy you feel right now?

.....

A big advantage of pen-ended questionnaires is that rich qualitative data is obtained as open questions allow the respondent to explain their answer. Disadvantages of open-ended questionnaires are:

- Time consuming to collect the data. It takes longer for the respondent to complete open questions. This is a problem as a smaller sample size may be obtained.
- Time consuming to analyze the data. It takes longer for the research to analyze qualitative as they have to read the answers and try to put them into categories by coding.
- Not suitable for less educated respondents as open questions require superior writing skills and a better ability to express one's feelings verbally.

Types of Questions

Questionnaires can hold questions of one or more than one type of questions. These question types are:

Close-ended and open-ended questions: When respondents are asked to chose given answers, it is close-ended. In open-ended question cases, respondents are free to respond a query in their own words.

Single or Multiple response questions: If respondents are guided to chose only one option from all given, it is single response query. Multiple response questions allow respondents to chose more than one given answers.

Ranked Response Questions: Sometimes it is useful for the respondent to rank a set of options by numbering them in order from 1 to the maximum number.

Rated Response Questions: A popular approach in the social sciences is to use Likert scales such as the example below:

Indicate your view of the following aspects of University Life					
	VI	I	N	U	VU
Hostel Life	1	2	3	4	5
Class Participation	1	2	3	4	5
Study Tours	1	2	3	4	5

Dichotomous Questions: A question that has two possible responses. For example: Yes/No, True/False

Contingency Questions: A question that is answered only if the respondent gives a particular response to a previous question. This avoids asking questions of people that do not apply to them (for example, asking an illiterate if he has ever attended university classes).

Matrix Type of Questions: Matrix question provide multiple answers to more than one persons or elements. These questions are in the form of tables where mostly the information is titled without proper sentencing like a question. These can satisfy the need for more than one variables information about many persons. Table asking demographic information in household survey questionnaire is good example of matrix questions.

Questionnaire Design

Careful questionnaire designing is very important. Following factors are considered while designing a good questionnaire:

- **Aims:** It is made sure that any questions asked address the aims of the research.
- **Length:** It is not easy for respondents to complete longer questionnaire. Questions should be short and clear.

- **Pilot Study:** Pilot study is very helpful to refine questions.
- **Question order:** The order of questions leads from easy to difficult questions.
- **Presentation:** Make sure it looks professional, include clear and concise instructions.
- **Complete:** Questionnaire is designed in a way that it gathers all information required.
- **No Double Questions:** Questions having double queries are avoided in a good questionnaire.
- **No Negative Questions:** Language of questions should be positive and negative words should be avoided.
- **No Leading Questions:** In a good questionnaire, researchers avoid leading questions which could change response of respondents.

Advantages and Disadvantages of Questionnaire

Advantage	Disadvantage
Can contact a large number of people at a relatively low cost (postal and telephone)	Response rates can be low (postal) and refusal rates high (telephone, face to face)
Easy to reach people who are spread across a wide geographical area or who live in remote locations (postal and phone)	There is little control over who completes a postal questionnaire, which can lead to bias
Respondents are able to complete postal questionnaires in their own time and telephone call-backs can be arranged for a more convenient time	Postal questionnaires are inappropriate for people with reading difficulties or visual impairments and those who do not read English
Telephone questionnaires can make it easier to consult some disabled people	Postal and phone questionnaires must be kept relatively short
Face to face questionnaires can make it easier to identify the appropriate person to complete the questionnaire	Face to face and phone questionnaires require the use of trained interviewers

Face to face questionnaires can be longer than postal and phone questionnaires, collect more information	Face to face questionnaires are time consuming for respondents, more costly and more labour intensive than other methods

Difference between Questionnaire and Interview Schedule

Interview schedule is also very important tool of data collection and is like questionnaire but it is completed or filled by interviewer or enumerator. Difference between questionnaire and interview schedule is given under in table.

Questionnaire	Schedule
Questionnaire is sent through mail and no further assistance from him	Schedule is filled by the enumerator or researcher
Questionnaire is cheaper	Schedule is costly as it require enumerators and finances
Non response is high	Non response is low
In case of questionnaire, it is not confirmed that expected respondent has answered the questions	Identity of respondent is known
Very slow method	Information is collected well in time
No or low personal contact	Direct personal contact
Questionnaire can be used only when respondent is educated	Information can be collected from illiterate through schedule