**Lesson Three: Data Collection Methods**

1. **Self-completed Questionnaire**

**1.1 Definition**

A questionnaire is a written list of questions, the answers of which are recorded by respondents, interpret what is expected and then write down the answers.

“A questionnaire consists of questions printed or typed in a definite order on a form or set of forms” (Kothari, 2004, p. 100).

It is “a self-report data-collection instrument that each research participant fills out as part of a research study. Researchers use questionnaires to obtain information about the thoughts, feelings, attitudes, beliefs, values, perceptions, personality, and behavioral intentions of research participants. In other words, researchers attempt to measure many different kinds of characteristics using questionnaires” (Johnson & katherin, 19, np).

* 1. **Benefits of the Questionnaire**

It is an effective method as:

* It is free from the bias of the interviewer; answers are in respondents’ own words.
* Respondents have adequate time to give well thought out answers (especially when it is mailed)
* Respondents who are not easily approachable can also be reached conveniently (email).
* There is low cost even when the universe is large and is widely spread geographically (email).
	1. **Characteristics of Good Questionnaires**
* In order to make the questionnaire effective and to ensure the quality to the replies received, a research should pay attention to the question sequence in preparing the questionnaire. The questions should be clear and smoothly-moving. Question-sequence should usually go from the general to the more specific and the researcher must always remember that the answer to a given question is a function not only of the question itself, but of all previous questions as well.
* Questions of personal character, the ones related to personal wealth, questions about the respondent intellect, etc., should be avoided.
* The questionnaire should be easily understood, simple (Use natural and familiar language)

 (convey only one thought at a time), concrete and should confirm as much as possible to the respondent’s way of thinking.

* To be successful, the questionnaire should be comparatively short and simple (its size should be kept to the minimum).
* Technical terms and vague expressions capable of different interpretations should be avoided.
* Open-ended questions should be avoided to the extent possible as they are difficult to analyse.
* Questions that affect the sentiments of respondents should be avoided.
* Adequate space for answers should be provided.
* There should always be provision for indications of uncertainty (do not know, no preference, etc.).
* Make sure the questionnaire items match your research objectives.
* Understand your research participants.
* Write items that are clear, precise, and relatively short.
* Avoid double-barreled questions. Do you think that teachers should have more contact with parents and school administrators?
* Avoid double negatives. Do you agree or disagree with the following statement?
* Determine whether an open-ended or a closed-ended question is needed.
* Use mutually exclusive and exhaustive response categories for closed-ended questions.
* Develop a questionnaire that is properly organized and easy for the participant to use.
* Always pilot test your questionnaire.

Questionnaires can be used to collect quantitative, qualitative, and mixed data. The content and organization of a questionnaire will correspond to the researcher’s objectives.

**1.4 Qualitative VS Quantitative Questionnaire**

Questionnaires that include mostly open-ended items are called qualitative questionnaires. These questionnaires are often used for exploratory research, such as when the researcher wants to know how participants think or feel or experience a phenomenon or when the researcher wants to know why participants believe something happens.

Questionnaires that include mostly closed-ended items are called quantitative questionnaires. These questionnaires are focused on getting participant responses to standardized items for the purpose of confirmatory research in which specific variables are measured and hypotheses are tested. The principle of standardization is very important in quantitative research; the goal is to provide a common stimulus (item stem, response categories, and any additional information) to each person in the research study (Dillman, 2007). This is done to ensure maximum comparability of responses.

In practice, most questionnaires employ a mixture of open-ended and closed-ended items; these are called mixed questionnaires (Johnson & Turner, 2003). Although we have classified questionnaires into three types, note that questionnaires actually fall on a continuum with qualitative and quantitative as endpoints and mixed in the middle

* 1. **Types of Questions**

**Open-ended questions:** in open questions, the respondent has to apply the answer in his own words. They are designed to permit a free response from the respondent rather than one limited to certain stated alternatives. This kind of questions is good when the issue under consideration happens to be a complex one and also when interest of the researcher is in the exploration of a process.

**Closed-ended questions:** in this type of questions, the respondent selects one of the alternatives possible answers put to him. It is easy to handle, simple to answer, quick and relatively inexpensive to analyse. But it may force a statement of opinion or an issue about which the respondent does not in fact have any opinion.

1. **Interview**

Another way to collect data is to interview research participants. An interview is a data-collection method in which an interviewer (the researcher or someone working for the researcher) asks questions to an interviewee (the research participant). That is, the interviewer collects the data from the interviewee, who provides the data. Interviews that are done face-to-face are called in-person interviews; interviews conducted over the telephone are called telephone interviews. A strength of interviews is that a researcher can freely use probes (prompts used to obtain response clarity or additional information). (Johnson & katherin, 19).

 According to Burns (1997, p. 329), “an interview is a verbal interchange, often face-to-face, through telephone may be used, in which an interviewer tries to elicit information, beliefs or opinions from another person”.

An interview is an interpersonal encounter. It is important that you (the interviewer) establish rapport with the person you are interviewing (the interviewee). The interview should be friendly. At the same time, you must be impartial to whatever the interviewee says to you. If you react positively or negatively to the content of the interviewee’s statements, you may bias the responses. It is also important that the interviewee trusts you, because without trust you are likely to obtain biased research data (Johnson & katherin, 19).

**2.1 Types of Interview**

* **Structured interview:** it involves “the use of a set of pre-determined questions, and of highly standardized techniques of recording”. The interviewer then “follows a rigid procedure laid down, asking questions in a form and order prescribed”.
* **Unstructured interview:** it is an interview that is characterized by a flexibility of approach to questioning. In it, the interviewer is allowed much greater freedom to ask, in case of need, supplementary questions or at times he may omit certain questions if the situation so requires. He may even change the sequence of questions.

**Tips for Conducting an Effective Interview**

1. Make sure all interviewers are well trained.

2. Do background homework on the interviewees so that you will know a little about the people you will be interviewing.

3. Establish rapport and trust with your interviewee.

4. Be empathetic but remain neutral toward the content of what the interviewee says.

5. Use gentle nonverbal head nods and verbal “um-hms” to show your interest in what the interviewee says.

6. Be reflexive (i.e., monitor yourself).

7. Make sure the interviewee is doing most of the talking, not you.

8. Be sensitive to gender, age, and cultural differences between you and the interviewee.

9. Make sure the interviewee understands exactly what you are asking.

10. Provide sufficient time for the interviewee to answer each question.

11. Maintain control of the interview and keep the interview focused.

12. Utilize probes and follow-up questions to gain clarity and depth of responses.

13. Maintain a respect for the interviewee’s valuable time. Interview protocol Data-collection instrument used in an interview

14. Typically, you should tape-record the interview session.

15. After an interview is completed, check your notes and recordings for quality and completeness.

1. **Observation**

**3.1 Definition**

Generally speaking, observation is any form of examination of events, behaviours, phenomena, etc., and by extension any individual datum, scores, value, etc., that represents an event behaviour, or phenomenon.

In research, observation is defined as the watching of behavioral patterns of people in certain situations to obtain information about the phenomenon of interest. The observer should attempt to be unobtrusive so as not to affect what is being observed. Observation is an important way of collecting information about people because people do not always do what they say they do. It is a maxim in the social and behavioral sciences that attitudes and behavior are not always congruent (Johnson…..

Observation is defined as an action of perceiving, identifying and evaluating.

**Advantages and Disadvantages**

An advantage of observation over self-report methods is the researcher’s ability to record actual behavior rather than obtain reports of preferences or intended behavior (Johnson….

Observation is not without weaknesses, however, some of which are that it generally takes more time than self-report approaches, it usually costs more money than self-report approaches, determining exactly why people behave as they do (i.e., determining their inner states) may not be possible through the use of observations, and people may act differently when they know they are being observed..

**3.2 Observational Study**

It is a research method used in social psychology, developmental psychology and ethology, in which the investigator records behaviour as far as possible without influencing it. An observational study is conducted in a naturally occurring situation (naturalistic observation), and an observational laboratory study is carried out in an artificial laboratory environment.

**3.3 Types of Observation**

* **Complete participant:** the researcher is concealing that s/he is an observer, and so mixing up and getting involved in the ongoing or everyday activities of the population of interest.
* **Participant as observer:** the fact that the observer is an observer is made clear to the group (social group of interest) from the beginning.
* **The marginal participant:** a passenger in a bus, a member of the audience in a concert, or sport meeting.

**Quantitative Observation and Qualitative Observation**

Quantitative (or structured) observation involves the standardization of all observational procedures in order to obtain reliable research data. It often involves the standardization of each of the following: who is observed (what kinds of people are to be studied, such as teachers or students), what is observed (what variables are to be observed by the researcher, such as time on task or out-of-seat behavior), when the observations are to take place (during the morning hour, during break time), where the observations are to be carried out (in the laboratory, in the classroom, in the lunchroom, in the library, on the playground), and how the observations are to be done (this involves the extensive training of observers so that they use the same procedures and so that high inter rater reliability can be obtained). Quantitative observation usually results in quantitative data, such as counts or frequencies and percentages. Different events may be of interest in quantitative observation (Weick, 1968). First, the researcher may observe nonverbal behavior (body movements, facial expressions, posture, eye contact, etc.). Second, the researcher may observe spatial behavior (the distance between different people and the distance between people and objects). Third, the researcher may observe extralinguistic behavior (characteristics of speech such as rate, tone, and volume). Fourth, the researcher may choose to observe linguistic behavior (what people say and what they write).

Qualitative observation involves observing all potentially relevant phenomena and taking extensive field notes without specifying in advance exactly what is to be observed. In other words, qualitative observation is usually done for exploratory purposes. It is also usually done in natural settings. In fact, the terms qualitative observation and naturalistic observation are frequently treated as synonyms in the research literature. Not surprisingly, qualitative observation is usually carried out by qualitative researchers.

Researchers record what they believe is important in their field notes (notes written down by the observer during and after making observations). It’s a good idea to correct and edit any notes you write down during an observation as soon as possible after taking them because that is when your memory is best. If you wait too long, you might forget important details and not be able to make sense of your handwritten, scribbled field notes. In addition to taking field notes during your observations, consider audiotaping and videotaping important scenes.

 Researchers conducting quantitative observation usually use checklists or other types of data-collection instruments, such as a laptop computer to record data or a videotape recorder to produce a record for later coding. The content of the data- collection instrument will depend on the research problem and objectives of interest to the researcher. Data-collection instruments in quantitative observation are usually more specific and detailed than those used in qualitative observation. Usually, data-collection instruments are closed ended in quantitative observation and open ended in qualitative observation because quantitative observation tends to be used for confirmatory purposes (i.e., to test hypotheses) and qualitative observation tends to be used for exploratory purposes (i.e., to generate new information).