**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).

**1.3 What Do Questionnaires Measure?**

Broadly speaking, questionnaires can yield three types of data about the respondent: factual, behavioral, and attitudinal.

1. Factual questions (also called “classiﬁcation” questions or “subject descriptors”) are used to ﬁnd out about who the respondents are. They typically cover demographic characteristics (e.g., age, gender, and race), residential location, marital and socioeconomic status, level of education, religion, occupation, as well as any other background information that may be relevant to interpreting the ﬁndings of the survey. Such additional data in L2 studies often include facts about the learners’ language learning history, amount of time spent in an L2 environment, level of parents’ L2 proﬁciency, or the L2 coursebook used.

2. Behavioral questions are used to ﬁnd out what the respondents are doing or have done in the past. They typically ask about people’s actions, lifestyles, habits, and personal history. Perhaps the most well-known questions of this type in L2 studies are the items in language learning strategy inventories that ask about the frequency of the use of a particular strategy in the past.

3. Attitudinal questions are used to ﬁnd out what people think. This is a broad category that concerns attitudes, opinions, beliefs, interests, and values. These ﬁve interrelated terms are not always distinguished or deﬁned very clearly in the literature.

• Attitudes concern evaluative responses to a particular target (e.g., people, institution, situation). They are deeply embedded in the human mind, and are very often not the product of rational deliberation of facts—they can be rooted back in our past or modeled by certain signiﬁcant people around us. For this reason, they are rather pervasive and resistant to change.

• Opinions are just as subjective as attitudes, but they are perceived as being more factually based and more changeable. People are always aware of their opinions but they may not be fully conscious of their attitudes (Aiken, 1996).

• Beliefs have a stronger factual support than opinions and often concern the question as to whether something is true, false, or “right.”

• Interests are preferences for particular activities.

• Values, on the one hand, concern preferences for “life goals” and “ways of life” (e.g., Christian values); on the other hand, they are also used to describe the utility, importance, or worth attached to particular activities, concepts, or objects (e.g., instrumental/ utilitarian value of L2 proﬁciency).

**1.4 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.

**1.5 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.

The typical questionnaire is a highly structured data collection instrument, with most items either asking about very speciﬁc pieces of information (e.g., one’s address or food preference) or giving various response options for the respondent to choose from, for example, by ticking a box. This makes questionnaire data particularly suited for quantitative, statistical analysis. After all, the essential characteristic of quantitative research is that it employs categories, viewpoints, and models that have been precisely deﬁned by the researcher in advance, and numerical or directly quantiﬁable data are collected to determine the relationship between these categories and to test the research hypotheses.

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

**1.6Types of Questions**

**Closed-ended questions:** Although this category subsumes several very diﬀerent item types, these all share in common the fact that the respondent is provided with ready-made response options to choose from, normally by encircling or ticking one of them or by putting an “X” in the appropriate slot/box. That is, these items do not require the respondents to produce any free writing; instead, they are to choose one of the given alternatives, regardless of whether their preferred answer is among those or not.

The major advantage of closed-ended questions is that their coding and tabulation is straightforward and leaves no room for rater subjectivity. Accordingly, these questions are sometimes referred to as “objective” items. They are particularly suited for quantitative, statistical analyses because the response options can easily be coded numerically and then entered into a computer database.

* **Rating scale:** Rating scales are undoubtedly the most popular items in research questionnaires. They require the respondent to make an evaluative judgment of the target by marking one of a series of categories organized into a scale. The various points on the continuum of the scale indicate diﬀerent degrees of a certain category; this can be of a diverse nature, ranging from various attributes (e.g., good bad; frequent rare) to intensity (e.g., very much not at all) and opinion (e.g., strongly agree strongly disagree). The points on the scale are subsequently assigned successive numbers, which makes their computer coding a simple task.

The most commonly used scaling technique is the Likert scale. Likert scales consist of a series of statements all of which are related to a particular target (which can be, among others, an individual person, a group of people, an institution, or a concept); respondents are asked to indicate the extent to which they agree or disagree with these items by marking (e.g., circling) one of the responses ranging from “strongly agree” to “strongly disagree.” For example:

Hungarians are genuinely nice people.

Strongly Disagree Disagree Neither agree nor disagree Agree Strongly disagree

After the scale has been administered, each response option is assigned a number for scoring purposes (e.g., “strongly disagree” = 1, “strongly agree” = 5). With negatively worded items—that is, items which address the opposite of the target concept—the scores are reversed before analysis (i.e., 5 becomes 1, 4 becomes 2, etc.). Finally, the scores for the items addressing the same target are summed up or averaged.

* **Multiple-choice items**

Language researchers will be very familiar with the multiple-choice item format because of its popularity in standardized L2 proﬁciency testing. The item type can also be used in questionnaires with respondents being asked to mark—depending on the question—one or more options. If none of the items apply, the respondent may have the option to leave the question unanswered, but because this makes it diﬃcult to decide later whether the omission of a mark was a conscious decision or just an accident it is better to include a “Don’t know” and a “Not applicable” category (and sometimes even a “No response” option). Also, it is often desirable to ensure that an exhaustive list of categories is provided, and for this purpose it may be necessary to include an “Other” category, typically followed by an open-ended question of the “Please specify” sort.

Multiple choice items are relatively straightforward. It makes them more reader-friendly if we can make the response options shorter by including as much information as we can in the stem without repeating this every time. It also makes it easier to answer them if the response options have a natural order; otherwise they should be arranged in a random or alphabetical order. It is an obvious yet often violated rule that all options should be grammatically correct with respect to the stem. Finally, the use of negative expressions, such as “not,” should be avoided in both the stem and the response options—a rule that generally applies to all question types.

Interestingly, multiple-choice items can also produce ordinal rather than nominal (categorical) data; that is, if the item is properly constructed, the various alternatives can represent degrees of an attitude, interest, and belief. Respondents are, then, instructed to choose only one of these options and their answers will be coded according to the value of the particular option they chose (e.g., Option A may be assigned “3” and Option D “1” depending on their content). Obviously the value of each option cannot be set in advance on a purely theoretical basis but can only be deduced from extensive pilot testing whereby the items are administered to a group of respondents and the value of each response option is calculated on the basis of their answers.

* **Rank Order Items**

It is a common human mental activity to rank order people, objects, or even abstract concepts, according to some criterion, and rank order items in questionnaires capitalize on our familiarity with this process. As the name suggests, these items contain some sort of a list and respondents are asked to order the items by assigning a number to them according to their preferences.

It is not easy to process the rank order items statistically. We cannot simply count the mean of the ranks for each item across the sample because the numerical values assigned to the items are not the same as in rating scales: they are only an easy technical method to indicate order rather than the extent of endorsement. That is, if something is ranked third, the value “3” does not necessarily mean that the degree of one’s attitude is 3 out of, say, 5 (which would be the case in a Likert scale); it only means that the particular target’s relevance/importance is, in the respondent’s estimation, somewhere between the things ranked second and fourth; the actual value can be very near to the second and miles away from the fourth or vice versa.

* **Checklists**

Checklists are similar to rank order items in that they consist of a list of descriptive terms, attributes, or even objects, and respondents are instructed to mark the items on the list that apply to the particular question. For example, students might be asked to mark all the adjectives in a list of personality characteristics that describe their teacher. This evaluation would, then, yield a score for the teacher on each characteristic, indicating how many raters checked the particular adjective; that is, the person’s score on each item can be set equal to the number of judges who checked it.

**Open-ended questions:** include items where the actual question is not followed by response options for the respondent to choose from but rather by some blank space (e.g., dotted lines) for the respondent to ﬁll. 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.

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 interrater 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, facialexpressions, 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).