Techniques for Data Collection

5

Reading Guide: This chapter details the main variations of two of the main techniques for collecting qualitative data, the interview and observation. Table 5.1 describes the distinctive aspects of eight types of interviews, while Table 5.2 describes the distinctive aspects of four types of observations. In addition to the interview and observation, this chapter discusses collection techniques through third parties (crowdsourcing), collection of documents and artifacts in the field, as well as open-ended questions.

The researcher can collect data using different techniques: interview, observation, spontaneous collaboration of third parties (crowdsourcing), open-ended questions, as well as the capture of documents, records and artifacts. In qualitative research, it is very common to use several of these techniques in the same project, considering the realization of data collection from multiple sources and in different perspectives. In this chapter, we will explore these different techniques within the context of qualitative data collection.

5.1 Different Types of Qualitative Interviews

The interview is the act of presenting questions to the interviewee and recording their responses. In general, the researcher should encourage the interviewee to speak. However, this standard posture can be carried out in different ways, using different techniques and strategies. The behavior of the interviewer and the set of actions to practice will depend on the type of interview defined by the researcher. Flick (2009), for example, described five types: focused interview, semi-standardized interview, problem-centered interview, expert interview and ethnographic interview.

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It is important that the researcher, when preparing the research project, is aware of the various types of interviews, the behaviors of the researcher and the actions demanded for each of them. The choice of the type of interview will depend on the context of each research, according to the questions associated with the selected research strategy, which will depend on the research problem to be addressed by the research. Below are described eight types of techniques for conducting interviews, in addition to the five addressed by Flick (2009), the phenomenological interview is described, as well as two other types of unstructured interviews, the oral history interview and the creative interview.

5.1.1 Focused Interview

The focused interview starts with a uniform stimulus to the interviewees, which can be the screening of a film, a lecture, a performance, a presentation of photos or images, an activity involving the interviewees, among other initial interactions. After the initial interaction with the interviewees, the impact of the initial interaction on the interviewees is analyzed, from an interview guide, with the aim of focusing as much as possible on a specific object and its meaning. This is a structured interview technique, as the same sequence of acts must be performed with all the interviewees regardless of the number of interview sessions to be conducted. The questions formulated are open, adhering to the principle of non-direction. These questions aim to seek the most detailed possible answers from the interviewees, going beyond superficial perceptions such as pleasant or unpleasant.

When applied to a group of people, this form of interview is called a focus group. The inputs of the session (information) are generated by the interaction within the group. The participants influence each other with their statements and responses to the stimuli emitted by the researcher who assumes the role of moderator of the session. The data fundamentals produced by this technique, the discussions among the group members, are transcribed and supplemented with the moderator's notes and reflections, and those of other observers, if they exist.

The focus group is appropriate when the goal is to explain how people perceive an experience, an idea or an event, as the discussion during the meetings is effective in providing information about what people think or feel, or even about how they act. A typical example of a focus group is the sessions conducted by company marketing professionals, with the aim of collecting consumer opinions on possible new products and services. For these sessions, typical users of the company's current products and services are invited, for whom a new version or even a substitute product is intended to be generated. Users test the product or service during the session and at the end of it, they give their opinions and views on them.

During the focus group, the researcher assumes the role of the session moderator, which requires other behaviors: cordial and at the same time firm, to maintain a pleasant environment as well as the discipline that will ensure the agenda is followed; tolerant of the diversity of participant behavior; engaging, in order to stimulate the participation of all participants; incomplete understanding, in order

to seek clarity of communication within the group; stimulating, to encourage those who are reluctant to participate; flexible, to improvise and change the plan in order to avoid distractions from the group work process; and sensitive, to guide the group's conversation at a good intellectual and emotional level. Because of these many attributes, often the researcher invites or hires a professional specialized in conducting focus groups to play the role of moderator of the focus group sessions.

5.1.2 Semi-Standardized Interview

This format is recommended for respondents who have some knowledge about the topic under study, that is, they have explicit and immediate assumptions that can be expressed by the respondent spontaneously when answering an open question. The idea is to develop an understanding or even a substantive theory substantiated from the respondents' speeches. In addition to open questions addressing the respondent's knowledge of the topic, there are three other sets of questions aimed at exploring assumptions about the topic, developed by the researcher (Flick, 2009):

a. Open questions about the topic, guided by theory;
b. Questions aimed at exploring hypotheses, also supported by theory on the topic; and
c. Confrontational questions for the answers provided by the respondent, with the aim of conducting a critical analysis of his position in terms of rival alternative answers to his. The interviewer must have a set of various versions of questions that will be applied according to the sequencing of the respondent's answers.

In the semi-standardized interview, there are at least two iterations between researcher and respondent. For the second meeting, the researcher uses the Structure Laying Technique (SLT) to present to the respondent the interpretation or the foundations of his thinking, obtained from the first interaction. The central idea with the application of the SLT is to reveal to the respondents the implicit theories contained in their initial discourse. The SLT presents the content in a way very similar to the formulation of scientific hypotheses, facilitating the evolution of scientific knowledge. Thus, a brief exposition of the SLT diagram should be made to the respondent, assisting him in reading and understanding its content. In a type of semi-structured research, the questions although flexible should cover a certain set of questions, aiming to gain understanding from the answers that will be transcribed, that is, textual information that will undergo a process of analysis.

5.1.3 Problem-Centered Interview

The problem-centered interview (PCI) turns to the discussion of a daily problem from the perspective of the practical knowledge of the respondent who has experience and interest in the problem. In the PCI, there is an "egalitarian dialogue

between the interviewer and interviewee in which the research question or the 'problem' is jointly refined" (Döringer, 2021, p. 268). The researcher has a conceptual and theoretical interest in the problem, while the interviewee knows the field reality. Thus, this joint work between researcher and respondent aims to co-construct or reconstruct the problem under analysis, through an interactive and interpretative process of the collected data. The researcher's prior knowledge integrates with the practical knowledge of the interviewee, giving opportunities to the researcher to refine or even develop scientific knowledge about the problem.

Operationally, PCI is characterized by three moments, below we describe and justify the activities carried out in these three moments (Witzel & Reiter, 2012):

a. Start the interview by presenting to the interviewee an introductory question that directs the conversation to the problem that is desired to be discussed. The question should be broad, leaving the interviewee at ease to approach the problem from their perspective;
b. Based on the theoretical framework of their knowledge, the researcher should encourage and sensitize the interviewee to tell their story. The interviewer will approach thematic aspects associated with the introductory question, requesting concrete examples of the interviewee's experience with each of the themes. The idea is to allow the interviewee to reveal their view on the problem in question, narrating various emblematic episodes about the topics of interest. As preparation for the interview, there is the formulation of the introductory question and the identification of the themes to be explored during the dialogue with the interviewee. Thus, the interview unfolds from the introductory question, punctuated in sequence with the placement of themes to be explored;
c. After the interviewee's narrative, in the format of storytelling, ad hoc questions can be formulated at the end of the interview. This occurs if some theme has not been addressed or well explained by the interviewee. This will ensure the comparability of the responses of all interviewees.

5.1.4 Expert Interview

Aims to discuss a subject of interest to the researcher in which the interviewee is an expert. The expert can be understood as that person with special knowledge in relation to the research problem, this knowledge being associated with their professional activity (Meuser & Nagel, 2009). Unlike the semi-standardized interview or the biographical interview that focuses on the person's experiences, in the expert interview the focus of interest is the interviewee's experience. There is more emphasis on the interviewee's professional knowledge than on a specific subject. An interview guide is used with a directive function to exclude unproductive topics in relation to the domain of interest. Unlike the semi-standardized interview or the biographical interview, the expert interview allows group discussion. In this format, we call it the Delphi technique (described below), replacing the need for individual interviews with the experts.

The Delphi technique aims at the prospecting of future trends on the object under study. The main objective is to obtain the most reliable consensus among experts on a topic. The technique encompasses a group communication process, involving experts on the topic under analysis, to address a complex problem (Linstone & Turoff, 1975). The entire dialogue is done asynchronously, with the researcher acting as facilitator and intermediary between them. Once the group of experts is defined, the researcher makes successive submissions of the questionnaire, as well as the tabulation of the answers and presentation of the justifications presented for each member of the group. From the second round, the questionnaire submission is accompanied by the answers without the identification of the names of the expert respondents, allowing each expert to read the others' responses. This feature of anonymous responses avoids psychological dominance by some experts, as occurs in face-to-face meetings.

From the second round, experts with dispersed responses within the group's concentration area, that is, the "outliers", need to justify their answer or reposition their initial response. Thus the basic operation is summarized in: (a) successive application of questionnaire to a group of experts; (b) in the interval of each round, perform analysis statistics of the responses; (c) provide feedback on the responses to the group for reassessment; and (d) monitor the repositioning of outliers or better description of their justification. This process repeats until there is no more repositioning of the experts regarding their opinions, usually achieved in the third round.

5.1.5 Ethnographic Interview

The ethnographic interview takes place in the field, while the researcher observes the actors of the society of interest of the study, that is, while practicing participant observation. As the observation time of the ethnographer is much longer than the interview time, the time factor has less importance in this type of interview. The ethnographic interview is set up as a series of cordial conversations, during the process of participant observation, in which the researcher slowly introduces new elements to help the interviewees to respond as informants (Spradley, 1979). From a methodological point of view, these are interviews with the aim of collecting qualitative data. The researcher conducts these cordial conversations, individually, with the members of the researched society, aiming to understand behaviors and rituals associated with the culture of the society under study.

The intention is to interview the users in their natural environment, while they are performing their tasks, asking them questions about what they are doing and the reasons for it. This act of observing the users while they perform activities and question them in their environments can bring important details to the study about social behavior. The fact that the researcher is immersed in the locality, listening and seeing the acts and asking only what is necessary, reduces the distortion and the bias of the data collection process, implying an increase in the quality of the research. The quality gain of the research with the ethnographic interview was also

explored by Rinaldo and Guhin (2022) who highlighted two additional pieces of information from this technique that enhance the analyses:

a. Allows researchers to triangulate the data in the field, considering that they are seeing the actions, hearing the dialogues, asking and hearing responses, all of this at the same time and in the same place;
b. Absorbing the "local knowledge", that is, going beyond the declarative culture revealed in a formal isolated interview, reaching the undeclared culture revealed both by the interview and by ethnographic observation.

5.1.6 Phenomenological Interview

This strategy starts with an open question about a topic of interest to the researcher, allowing the interviewee the possibility of expressing their point of view extensively (Giorgi, 1997). After the presentation of the question, the interviewer must remain exclusively attentive and interested in the interviewee's speech. This act of posing the question and simply listening, without concern for analysis and development of value judgment during the interviewee's speech, is called "active listening". By adopting this posture, the interviewer focuses exclusively on the report of experiences, avoiding that their assumptions or comparisons with other experiences lived contaminate their thoughts and interfere in the conduct of the process.

The act of suspending value judgment while the interviewee speaks also has a specific denomination, the "phenomenological epoché". According to Sanders (1982) the phenomenological epoché implies in "disinterested contemplation", in other words, the suspension of judgment does not doubt the existence of something, but refrains from issuing judgments about this thing. Thus, the proposal of the epoché is the temporary suspension of all personal prejudices, beliefs or assumptions of the interviewer about something. This allows the interviewer to focus exclusively on the pure and free view that the interviewee has about something, that is, what this thing essentially means to the interviewee.

Once the interviewee's speech is transcribed, the researcher makes, later, notes about the points where there are doubts and that deserve greater understanding. This document is presented to the interviewee in order to seek more information and this can be done in person, through a second interview, or asynchronously by sending the document with the notes of the doubts. This second moment allows the interviewee to reconstruct the details of their experience within the context in which they occur or occurred. In this second moment, it is expected from the interviewee to complement and clarify doubts from the first iteration. In a third moment, the researcher should encourage the interviewee to reflect on the meaning of their experience in question. Due to these three moments of interaction and detailing of the experience, the phenomenological interview is also referred to as "in-depth interview" (Seidman, 1997).

5.1.7 Oral History Interview

This interview is aimed at understanding and obtaining life history of a person in their own words. Conducting the oral history interview is a way to reach groups and individuals for whom there is no availability of record of information of research interest. Obviously, before conducting the interview, there should have been previous work identifying knowledgeable persons on the research topic of interest, as well as preliminary research of the literature related to the topic of interest aiming to develop questions that can be formulated during the interview (Collins & Bloom, 1991). The questions often do not need to be formulated, being only presented for topics not naturally addressed by the interviewee or commented on very briefly.

During the oral history interview, the researcher should show cordiality and make the interviewee feel comfortable. The pace in terms of time and agenda is up to the interviewee's availability, characterizing an unstructured work. In this type of interview, it is very common for the interview to require more than one date, that is, more than one session to present the whole story. The interviewer should inform at the beginning of the interview that it is not an intrusive or inquisitive session, but of scientific interest in the life story of the interviewee. The interview should be conducted as a friendly dialogue between two people. Notes should be avoided during the interview, as this tends to generate insecurity in the interviewee and shake the trust relationship previously established when inviting the interviewee to collaborate with the research. The interviewer should only film the session, according to a previous agreement when making the invitation, an agreement remembered at the beginning of the recording.

Although the interviewer has a general direction for the interview, the interviewee may drift to various topics, off the agenda of interest. A strategy to return the conversation to the research topic of interest is to take a break in the interview, using the restart of the interview to remind the central topic. Another resource to resume the topic during the interviewee's speech, without the need to interrupt the interview, is presenting one of the previously formulated questions about the topic of interest to the interviewee. After the end of the interview, it is important that the interviewee signs a consent form for the use of the information for the purposes of the research in question. Attached to the consent form should be the transcription of the interviewee's speeches.

Other important tips for a good conduct of the oral history interview are (Larmour, 1994): do not rush, let the interviewee tell their story; do not throw more than one question at a time; show interest in the story, including with non-verbal signs; use your list of notes to know the topics that still need to be addressed by the interviewee; check your filming equipment from time to time to make sure everything is being filmed, it's important to check this at each rest stop; only write down terms and words that catch your attention for later questioning; each interview session should not exceed 90 minutes.

5.1.8 Creative Interview

Technique used to collect data from a group, with the interviewees selected intentionally (not random or statistical sampling), according to the research perspectives of interest. Its methods are quite open and unconventional, in the sense that these interviews are not structured and do not follow rules, on the contrary, they are quite flexible and adapt to each situation, and can take a long time to conclude (Douglas, 1985). Its processes involve the construction of content through the elaboration of drawings, of presentations, of diagrams, of dance, of making films, of photos, among other means. It is configured as a creation situated and contextualized by the participants, a particular and not universal knowledge.

The activities of the creative interview process can be developed in different locations and under different conditions such as moving, traveling, participating in a project or standing in a location, for example, in a room. During interactions with those involved in the creative interview, the researcher seeks to collect aspects of the situational dynamics, the environment, the physical and non-verbal elements, as occurs in the ethnographic interview. These collected inputs are of nature "visual and the sensory, and which are worthy of investigation but cannot always be easily expressed in words, since not all knowledge is reducible to language" (Bagnoli, 2009, p. 547).

The explanation of the different types of interview highlighted the distinctive aspects regarding the techniques employed and the attitudes required of the researcher. Table 5.1 summarizes some of these differences for the eight types of interviews analyzed.

5.2 Collection of Documents, Records and Artifacts

The terms pervasive computing, information society and Internet phase two are some of the many terms used to highlight the digitization of society, which has made a large set of data about different entities available to researchers. Researchers who make use of these sources, working with emerging tools and methods, have been called bricoleurs, being responsible for generating great findings, practically, from nothing, in terms of being something unthinkable until then (Baker & Nelson, 2005).

The search for these documents and records is called documentary research. If the researcher can command the instructions for generating the report (information) from the collection of records (data), we have what Scott (1990) called close interaction between the researcher and the content. If the information has already been generated and the researcher cannot influence the generation process (definition of criteria), we have mediated interaction. Documentary research can also cover physical documents and artifacts, similar to what happens with archaeology. Some examples of physical documents: manuscripts, letters and diaries, laws, reports, public data, newspaper and magazine texts, pamphlets, medical exams, memos, advertisements, company invoices, photographs, maps, paintings,

Table 5.1 Distinctive aspects of the eight types of interviews studied

Type of interview	Actors individual or group	Actors profile specialist or typical user	Interaction synchronous or asynchronous	Processes unstructured, semistructured, or structured	Discussion present, past or future
Focused interview	Both	Typical user	Synchronous	Structured	Present
Semi-Standardized interview	Individual	Specialist	Synchronous	Semistructured	Present
Problem-centered interview	Individual	Both	Synchronous	Unstructured	Past and Present
Expert interview	Both	Specialist	Both	Structured	Future
Ethnographic interview	Individual	Typical user	Synchronous	Unstructured	Present
Phenomenological interview	Individual	Typical user	Synchronous	Semistructured	Past
Oral history Interview	Individual	Typical user	Synchronous	Unstructured	Past
Creative interview	Group	Typical user	Synchronous	Unstructured	Present

films, architectural drawings, organograms, among others. As an example of tangible artifacts we have: produced pieces, furniture, tools, among many other objects produced by man.

The decision to capture documents in the field should consider aspects such as: authenticity of the document, credibility of the source, representativeness of the document and the meaning of its content. As for the artifact, the main questions are associated with provenance (origin), who and when (age) it was developed. If these physical or digital entities collected are not from a static environment, like the historical records of an archive, but extracted from a current and dynamic environment, it is equally important to record the context of use of that entity in that context. In this case, the importance attributed by the actors who develop or use it, as well as the use and purpose attributed to the entity in that context, should be recorded.

5.3 Different Types of Qualitative Observations in the Field

The observation technique uses our various senses to describe the systematic of events, behaviors and artifacts used in the social environment of research interest (Marshall & Rossman, 1989). The techniques of direct observation of phenomena in their natural environment are so important for various areas of science

that many epistemologists define them as a research paradigm, calling it observational research or field research. In this subsection, we will describe three types of field observation, commonly practiced by researchers: natural observation, participant observation and covert participant observation. In addition to these three field observations, which occur in a natural and unstructured environment, we will also describe the process of controlled observation, carried out in an unnatural environment with structured procedures.

5.3.1 Natural Observation

In natural observation, the social group, the object of observation, is aware of the presence and intentions of the researcher. This allows the researcher to be completely honest and transparent with the interviewees and avoids possible ethical problems, such as those associated with the lack of consent from the observed people. It also prevents the researcher from getting too close to the participants and becoming an element of the group. Thus, natural observation helps to keep the observation objective and free from questioning. However, the participants knowing the objectives of the observer may condition their behaviors to what they believe to be expected by the researcher. In practice, the presence of the researcher can bias the observation environment.

Natural observation is a very common technique in Administration research. Citing its application in some widely disseminated research in Administration, we have the research of Mintzberg (1973), which discussed the managerial roles from data obtained from natural observation with managers from different industries and at different organizational levels. Kanter (1983) used natural observation with members of various organizations to study organizational behavior and change, while Cohen et al. (1972) used the same technique to discuss work practices and organizational learning.

5.3.2 Participant Observation

In participant observation, the researcher learns to act like the other members of the social group, in order to blend in with the community that is the object of study. The central idea is for the researcher to participate in the community of interest is to experience the feelings and other aspects difficult to be observed or even to be transmitted by the other members of the social group. The researcher in this mode of observation must adopt a very open and flexible posture, without judgments, but interested in learning more about others and being aware of a possible cultural shock. Misunderstandings can be avoided if the researcher adopts the posture of a careful observer and a listener attentive, open to the unexpected that can be learned from the daily practice of living with the social group (De Walt and De Walt, 1998). It is important to remember that the technique of participant observation

is the main source of data collection for some research strategies, as occurs with ethnographic research.

Obviously the presence of the researcher with the social group can cause a behavior bias among the group members at first, but this bias tends to be reduced as the time of interaction with the group is prolonged. Behavior changes tend to be reduced as the researcher begins to be accepted by the group and, often, perceived as a member of the group itself. Thus, in this type of observation, the longer the interaction period, the higher the quality of the researcher's perceptions in the field.

5.3.3 Covert Participant Observation

In covert participant observation, the social group, the object of observation, is not aware of the presence and intentions of the researcher. This allows for a very different position from participant observation. One advantage of covert participant observation is that it allows access to social groups that normally do not provide consent for research. Therefore, this technique allows for researching and expanding knowledge about lesser-known social groups, which in turn will expand our understanding of the world. The greatest advantage, however, lies in the anonymity of the researcher, which results in less interference in the studied environment, resulting in greater validity of field observations.

The researcher is subject to ethical questions by keeping his true intentions secret, especially with regard to the lack of consent from the group. Another negative aspect is that the researcher cannot feel protected when dealing with social groups that operate on the fringes of society. There is also the risk of the researcher becoming an element of the group, which could result in bias in his analyses. When analyzing the ethical issues of covert participant observation in the field of Administration, Oliver and Eales (2008) understood that it is an ethical and effective method. They highlight that researchers should be aware of the possible consequences for themselves in terms of personal, emotional and trust issues that revolve around the omission of information associated with covert participant observation.

5.3.4 Controlled Observation

In controlled observation, the people to be observed are led to an environment where the observation will take place. In exact sciences, this environment is usually a university laboratory, a company or a research center (Kothari, 2010). In social sciences, as is the case with research in Administration, we usually use meeting rooms of the university itself, hotel rooms, theaters and other spaces that are quite different from the typical laboratory. The researcher decides the location where the observation will take place, that is, there is no collection in the natural environment of the observed. In addition, the researcher defines at what

Table 5.2 Distinctive aspects of the four types of observation

Type of observation	Recognition of the researcher by the observed(s)	Collection in the natural environment of the observed(s)	Researcher only observes	Researcher practices empathy by putting himself in the position of the observed(s)
Natural observation	Yes	Yes	Yes	No
Participant observation	Yes	Yes	No	Yes
Covert participant observation	No	Yes	No	Yes
Controlled observation	Both alternatives	No	No	No

moment the observation will occur, with which participants and under what circumstances, using a standardized procedure. Participants are randomly allocated to each group that will be associated with an independent variable, allowing comparisons between different contexts and/or groups. Due to all this influence of the researcher on the collection environment, defining both the location and the collection method, this type of observation is also called structured observation.

It is important to note that not always the observed, invited to the observation environment, are aware that it is a session for data collection for scientific purposes. Many interactions require as natural an act as possible and, for this, the session is not always announced as a scientific event. It can be announced as an event for commercial purposes, for understanding the consumer, or another form of interaction that is pertinent to the actions that will occur during the session.

The explanation of the different types of observations highlighted the distinctive aspects regarding the techniques employed and the attitudes demanded of the researcher. Table 5.2 summarizes the four types of observation studied, describing their distinctive aspects.

5.4 Spontaneous Third-Party Collection (Crowdsourcing)

In the action of crowdsourcing, there is large-scale data collection, carried out by many people in society, usually for free. This collection practice was only recently enabled, due to the new resources of information and communication technology, in particular, the creation of the large data network, the Internet, as well as the new mobile devices connected to it. Thus, the term crowdsourcing is also new, included only in 2011 in the dictionary Merriam-Webster, which points to the year 2006 as its emergence, its first public use. This term is the result of the composition of the words crowd and outsourcing. The idea here is to delegate the collection activity, usually conducted by researchers or their representatives, to society as a whole. For

this, this collective of people must be motivated, that is, they must perceive the collection action associated with a noble and praiseworthy action, compatible with their values and beliefs. In addition to the dissemination of information about the research with the aim of sensitizing and motivating society members to collaborate with the research, researchers must provide and publicize a technological platform, an application, so that the community can make their contributions in the simplest and fastest way.

Research that designs the use of crowdsourcing aiming at the participation of the collective of employees of one or more companies, like a business cluster, can be more easily understood, especially in more modern and innovative organizations. In these organizations there is already a culture of crowdsourcing, they have it as a practice or a recurring process "for different purposes, such as group decision, idea generation, problem solving, and software development" (Thuan et al., 2018, p. 286). Among the pioneering and most widespread examples of crowdsourcing we have the development of Linux software, made up of great collaboration between a large collective of programmers with the aim of providing an operating system with open codes and more accessible to society as a whole (Warner, 2011). Another good example of crowdsourcing is the content capture for the constitution and continuous development of the Wikipedia dictionary, with people proposing new words and their definitions.

In the context of research activities, crowdsourcing can have several other applications besides data collection, such as (Dunn & Hedges, 2013): text coding by collaborative tagging action, content correction or modification, transcription, recording and creation of content, commenting on responses and declaring preferences, categorization, cataloging, contextualization, mapping and georeferencing. Thus, throughout this book we will make other mentions of the term crowdsourcing not associated exclusively with data collection activities, but with other fronts of scientific research work.

Unfortunately, not every research has an evident social motivation or appeal that can naturally attract the participation of a large public of respondents. In general, considering the various areas of science, it is estimated that only 2% of the total people contacted and invited to participate in the research collaborate by responding, for example, to a questionnaire. The combination of technological facilities with the insertion of financial reward has generated some new specialized services for data collection. One of these services is offered by the bigtech Amazon, called Amazon Mechanical Turk or just MTurk (Peer et al., 2014). Among the mechanisms employed to ensure the quality of the collected data is the insertion of attention check questions (ACQs), which end up preventing the insertion of responses from people merely interested in the financial reward.

5.5 Open-Ended Question

The questionnaire is a structured and efficient way of collecting data, very common in quantitative research, which predominantly uses closed-ended questions, that is, questions that ask the respondent to choose an answer from a list of possible responses. Conversely, qualitative research involves few open-ended questions, which allow the respondent to freely express their opinion in the form of free text. Below are some examples of open-ended questions used in different qualitative research strategies:

- Coates (2017, p. 44) employed phenomenological research to discuss the perception of Generation Y members, who work full-time, on how they understand the phenomenon of work. For this, he used the following open-ended questions: "What does work mean to you? How have you developed your meaning of work? What analogy or metaphor would you use to represent the meaning of work to you, and why?";
- Gillespie et al. (2013, p. 388) used ethnographic research to study the communication process among health professionals involved in performing surgeries (nursing, anesthesia and surgery). For this, they used open-ended questions such as: "Can you describe the characteristics of an effective team in surgery? and, Based on your experience, what are some of the obstacles to teamwork in surgery?".

Questions for Reflection:

1. Considering the two typologies studied, that of interviews and observations, what are the pairs, the interview-observation combinations that are most relevant and likely to occur?
2. Among the possible interview-observation combinations, which dyads can be considered incoherent?
3. Are open-ended questions more likely to occur within the context of which types of interviews and observations?

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