Interview: Data Collection Methods in Qualitative Research

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Abstract

This article has been prepared using descriptive approach. It describes in brief, the sampling technique and sampling size that are practiced in different approaches of qualitative research. Similarly, it describes the primary data collection methods that are mostly used in qualitative research such as interview, observation and documents. The main purpose of this article is to make familiar with qualitative sampling strategy and data collection method that are used in qualitative research for beginner researcher.

Keywords: data collection methods, interview, qualitative research

Qualitative Research

Quantitative and qualitative research may be considered as the two main empirical research approaches within the behavioral, social, and/or human sciences. The quantitative approach represents the orthodoxy and has been dominant in both research practice and training. However, qualitative research has considerably increased in relevance in the last few years, establishing itself as a viable alternative approach. These two research approaches are dominated by a set of principles that provide the foundations to the methods and, thus, drive their application. Quantitative research approach is guided by the positivist and post- positivist philosophy and qualitative research is most commonly associated with the interpretivist-constructivism philosophy (Mason J. , 2002).

Qualitative research is a form of social inquiry that focus on the way people interpret and make sense of their experience and the world in which they live. A number of different approaches exist within the wider framework of this type of research, but most of these have the same aim to understand the social reality of individuals, groups, organization and cultures. Researcher use qualitative approach to explore the behavior, perspective and experiences of the people they study.

The basis of qualitative research lies in the interpretive approach to social reality (Holloway, 1997). It aims not to impose preordained concepts; hypotheses and theory are generated during the course of conducting the research as the meaning emerges from the data. Thus, qualitative research is that it "calls for the investigator to enter into the lives of the persons being studied as fully and naturally as possible" (Stainback & Stainback, 1988).

The goal of qualitative research is to gain an in-depth, holistic perspective of groups of people, environments, programs, events, or any phenomenon one wishes to study by interacting closely with the people one is studying. The researcher tries to minimize the distance between him or herself and those being researched. Qualitative researchers deal with the fact that their own values cannot be kept out of the experience by admitting the value-laden nature of the experience.

Objective of the Study

The main objective of this study is to acknowledge the researchers about qualitative research; specially research based on interview.

Data Collection Method in Qualitative Research

Social scientists use qualitative research approach to accumulate a detailed account of human behavior and beliefs within the contexts they occur. Furthermore, with the use of non-numerical data, this line of research seeks to explore and describe the 'quality' and 'nature' of how people behave, experience and understand (Alshenqeeti, 2014). Therefore, the most popular data collection methods are in-depth interview, focus group discussion and observations (Sargeant, 2012).

Interview

Interviews are universal in everyday life. We have all been interviewed, at school, at university, for jobs, in a medical setting, and seen or read interviews with others in television and newspapers. An interview is a conversation for gathering information in qualitative as well as in mixed research design. In qualitative research interviewer, who coordinates the process of the conversation and asks questions, and an interviewee, who responds to those questions. (Baden & Major, 2013). Interviews are an appropriate method when there is a need to collect in-depth information on people's opinions, thoughts, experiences, and feelings. Interviews are useful when the topic of inquiry relates to issues that require complex questioning and considerable probing (Edwards & Holland, 2013).

Interviews range may be structured, semi-structured or unstructured (or focused) interviews. The structured interview is at the quantitative end of the scale, and more used in survey approaches. The rest of the scale, semi-structured and unstructured, is the area occupied by qualitative researchers. The other terms used in qualitative interviewing are in-depth, informal, non-directed, open-ended, conversational, naturalistic, narrative, biographical, oral or life history, ethnographic and many more. The terms used for any particular interview type relate to the underlying philosophy and specific approach taken to research (Edwards & Holland, 2013).

In- Depth Interview

An in-depth interview is an open-ended, discovery-oriented method to obtain detailed information about a topic from a stakeholder. The goal of the in- depth interview is to explore in depth a respondent's point of view, experiences, feelings, and perspectives. Generally in-depth interview is conducted face to face and sometimes using telephone. They are, therefore an especially good choice for communities who have **unique research goals** that do not easily fit into some of the common objectives described in this manual. When the topic is **highly sensitive in nature and it needs to explore**, and people may be uncomfortable sharing their honest feelings in a group setting, or in situations when it would be **logistically difficult** to get the people the researcher wants to hear from into one room at one time in such a situation in-depth interview is appropriate (Pant, 2010).

In-depth interviews have more in common with a journalist's interview. In-depth interview functions much more like a moderator guide—there are no scales, respondents answer in their own words, and the interviewer can adjust the order and flow of the questions and ask additional questions as needed. In-depth interviews are suitable and more common when the interviewee is limited to 10 to 15 in numbers. In-depth interviews are useful the researcher want detailed information about a person's thoughts and behaviors or want to explore new issues in depth (Boyce & Neale, 2006).

Focus Group Interview

Focus group research interview is defined as a method of collecting data, in a safe environment, from more than one individual at a time, regarding a specified area of interrogation (Krueger & Casey, 2000). The focus or object of analysis is the interaction inside the group. The participants influence each other through their answers to the ideas and contributions during the discussion. The general characteristics of the focus group are people's involvement, a series of meetings, the homogeneity of participants with respect to research interests, the generation of qualitative data, and discussion focused on a topic, which is determined by the purpose of the research (Freitas, Oliveira, Jenkins, & Popjoy, 1998).

Focus group research method is advisable for generating ideas for investigation or action in new fields; for generating hypotheses based on the perception of the participants; to evaluate different research situations or study populations; to develop drafts of interviews and questionnaires; to supply interpretations of the participants' results from initial studies; and for generating additional information for a study on a wide scale. A focus group generally involves 6-10 person (Pant, 2010).

Observation

Observation is a way of gathering information by watching behavior, events, or noting physical characteristics in their natural setting. Observations have led to some of the most important scientific discoveries in human history. Charles Darwin used observations of the animal and marine life at the Galapagos Islands to help him formulate his theory of evolution that he describes in On the Origin of Species (Driscoll, 2011).

In observation, the researcher uses all of his/her senses to gather information about the phenomena under study. A variety of material should also be used to enhance sensual observations. Audio-recorders can be used to tape interviews. Video-recorders or cameras can be used to record the activities of the insiders (Baker, 2006).

Observations can be overt (everyone knows they are being observed) or covert (no one knows they are being observed and the observer is concealed). The benefit of covert observation is that people are more likely to behave naturally if they do not know they are being observed. However, the researcher should consider the ethical issues while conducting observation.

Observations can also be either direct or indirect. When the researcher watch interactions, processes, or behaviors directly as they occur is called direct observation; for example, observing a teacher teaching a lesson from a written curriculum to determine whether they are delivering it with fidelity. Indirect observations are when the researcher watch the results of interactions,

processes, or behaviors; for example, measuring the amount of plate waste left by students in a school cafeteria to determine whether a new food is acceptable to them (Pant, 2010).

Documents

Documents are written, printed, visual or electronic matters that provides information or evidence that serves an official document (Baden & Major, 2013). The underlying intent of a document is to convey a message or information to individuals or groups who will consume it. Documents provide important clues for a researcher about the research context. The document may be public document, practical document, personal documents or files etc. All these are important source of qualitative information.

Types of Interview

Interviews range through a continuum, from structured, semi-structured, to unstructured based on degree of flexibility. The **structured interview** is at the quantitative end of the scale, and more used in survey approaches. Briefly, the structured interview is based on a questionnaire with a sequence of questions, asked in the same order and the same way of all subjects of the research, with little flexibility available to the researcher. The major objective is for neutral interviewers to obtain comparable information from a potentially large number of subjects. It is typical of more positivist approaches, with methodological rules for its practice, and often is subjected to statistical methods of analysis (Edwards & Holland, 2013).

In a **semi - structured interview**, the researcher not only follows some preset questions but also includes additional questions in response to participant comments and reactions. The interviewer relies upon an interview protocol, asking questions and covering topics in a particular order, and from time to time strays from the guide as appropriate. The questions do not necessarily follow a set of order as they do in structured interview, but they are not as broad and free ranging as other forms of interview. The questions tends to be open ended enough to allow interviewees to express their perspectives on atopic or issue and also allow for comparable data that can be compared across respondents. Semi structured interviews are often used in qualitative research (Baden & Major, 2013).

In an **unstructured interview,** the researcher has a goal and plan in mind but does not use structured interview protocol. The type of interview relies upon the spontaneous generation of questions. Most questions arises from context. The questions tends to be opened ended that requires broad responses and that enable a conversation about a specific topic. Researchers use unstructured interviews when they have a deep understanding of the topic and the setting and possess a clear agenda, yet remain open to revising their ideas based upon their results (Baden & Major, 2013).

Choosing Appropriate Interview Media

The interview can be obtained using the various appropriate media. The researcher can select the suitable and one or more interview media as per the requirements of the study. The main interview media frequently used in research are face to face interview, telephone interview, instant messaging interview, email interview, computer conferences / chat interview, online / space interview, and self-interview etc.

Face to Face Interview

The face to face interview is the mode in which an interviewer administers a structured or partly structured questionnaire to a respondent within limited period of time and in the presence (usually at hone) of the respondent. This is the oldest form of data collection. Because of in flexibility and great potential, the face to face interview has been considered a superior data collection technique (Pant, 2010).

Telephone Interview

In telephone interviews the researcher and participant are each in, and in control of, their own separate space, and possibly at a considerable distance, although their exchange is synchronous in time. Different time zones might be needed specific arrangements of time. Telephone interview are cheaper, faster and, with participants who are hard to reach or located in difficult or dangerous places and spaces, safer. The telephone interview can be more acceptable to some participants when discussing sensitive topics, for confidentiality /privacy or convenience, for fitting into busy and complicated lives. Lack of face-to-face contact, lack of information about the other from their appearance, non-verbal communication in the interaction and the physical context when using telephone interview (Edwards & Holland, 2013).

Instant Messaging Interview

Instant messaging interviewing use synchronous computer communication such as chat or instant messaging. Using instant messaging interviews for collecting information is appropriate when the telephone facility is available, interviewer and interviewee are competent in typing, both have computer access etc., (Baden & Major, 2013).

Email Interview

Email interview provide an approach to interviewing that is asynchronous, which can be an assets in some cases. Email interview helps to collect information when the interviewer and interviewee are separated in time as well as space, with gaps of varying length between them. Email interview is written, producing text, obviating the need for transcription, saving time and resources. The researcher can have several interviews running at the same time, and both researcher and participant can have time for reflection on the responses (Edwards & Holland, 2013).

Computer Conferences / Chat Interview

Computer conference allows for real time, synchronous communication as well as visibility between interviewer and interviewee. In this approach the interviewer can observed facial expressions, read body language and get some insights from the interviewee's surroundings (Baden & Major, 2013).

Online / Space Interview

Technological development has led to the possibility of calls made online, with similar advantages to interviewing on a landline. Here a further possibility is visual contact (e.g. via Skype or Face time) where interviewer and interviewee can see each other, and perhaps part of their environment. Visual cues can become available once more, although not the full ethnographic possibilities. The interviewees must also have access to the necessary technology. Paul Hanna (2012) argues strongly that the benefit of using internet technologies such as Skype (low costs, ease of access,

minimization of ecological dilemmas and the partial overcoming of issues of spatiality and physical interaction) make this a very valuable interview method (Edwards & Holland, 2013).

Self-Interview
In the self-interview the researcher is physically absent from the interview site, and the interviewee undertakes the interview in their own way in their own space. Initially using face-to-face interviews, the researchers realized that the participants needed more time to think, and to reflect on the memories elicited. They asked potential informants to record themselves talking about photos and recorded music and how these operated as vehicles of memory in their lives. Removing the interviewer enabled the participants to pause, think and reflect on their chosen images, and possibly to come to terms with any emotions evoked, choosing when to talk and for how long at any time. Audio diaries have long been used in qualitative research. The participant can record their thoughts about their experiences as they occur, without the mediating presence of the researcher, similar to written diaries, but in a more immediate way that is possibly easier for the participant (Edwards & Holland, 2013).

Sample Size in Qualitative Research
A feature of qualitative sampling is that the number of cases sampled is often small. This is because, a phenomenon only need appear once to be of value. There is no need for scale as there is no need for estimates of statistical significance. Furthermore, because qualitative investigation aims for depth as well as breadth, the analysis of large numbers of in-depth interviews would simply be unmanageable because of a researcher's ability to effectively analyses large quantities of qualitative data. However, the small-scale approach only works if the researcher has a strong sampling strategy.

The issues that should be considered when determining the sample size for qualitative investigation are dependent on the heterogeneous or homogeneous nature of the sample population, or requirements of the data collection methods employed; for example, focus groups tend to be more productive and manageable if participants have some commonality.

The number of selection criterion required and the degree to which criteria are nested (dependent on whether certain characteristics are to be controlled e.g. age), are important considerations. The intensive nature of the study; whether multiple samples are required, the inclusion of a control sample for instance; and the resources available to conduct the study, are also important for determining sample size (Ritchie & Lewis, 2003).

The concept of saturation is often mooted as the ideal guide for the number of interviews to be conducted, especially where researchers are taking an interpretive or grounded approach. That is, the sample size is sufficient when additional interviews or focus groups do not result in identification of new concepts, an end point called data saturation (Sargeant, 2012). Thus, qualitative interviewers should continue sampling and identifying cases until their interviewees are not telling them anything that they have not heard before. Thus, rather than the number in a sample being representative of types of people as in quantitative research, in qualitative research it is the range of meanings that should determine numbers of interviewees in a study. Using data saturation is challenging for many qualitative interviewers, however, because sampling, data

collection and data analysis have to be combined, and it is not possible to specify how many interviews are necessary in advance (Edwards & Holland, 2013).

The sample size depends on the heterogeneity of the population; the number of selection criteria; the extent to which 'nesting' of criteria is needed; groups of special interest that require intensive study; multiple samples within one study; types of data collection methods use; and the budget and resources available (Mason M. , 2010). As a result of the numerous factors that can determine sample sizes in qualitative studies, many researchers shy away from suggesting what constitutes a sufficient sample size. Thus, there is no hard and fast rule for determining the optimal sample size. Some example has given suggested by prominent researcher in different approaches will offered as guidance the authors. These numbers do not tend to present empirical arguments as to why these numbers and not others for example.

According to Bernard explained in his book Social Research Methods the Ethnography and Ethno Science should have 30-50 interviews for qualitative research (Morse, 1994). Similarly, his studies states that most studies are based on samples between 30-60 interviews used in qualitative research (Bernard, 2000).

Similarly, the suitable interviews in qualitative research using grounded theory approach should be 20-30 participants (Creswell J. W., 1998); 30-50 interviews (Morse, 1994).
Likewise, the Phenomenology approach should be appropriate number of interviews 5 to 25 (Creswell J. W., 1998); and at least six participants (Morse, 1994).
All qualitative research should be involved the suitable number of interviews should be Fifteen (15) is the smallest acceptable sample (Bertaux, 1981).

The intensity and therefore the length of the qualitative interview will also impact on the design of the qualitative sampling strategy and the decision of sample size. Longer interviews may provide more data than shorter interviews. A decision may be taken, depending on the nature of the study, to conduct a larger number of shorter interviews or a smaller number of longer interviews.

Sampling Technique
The research approaches determine the sampling techniques. In quantitative research approach generally adopts random sampling (Probability sampling), whereas in qualitative research adopts non-random (Non-probability) sampling. Each element in the population has an equal and independent chance of selection in the sample when we use random or probability sampling (Kumar, 2012). The choice of the sample does not influence by other consideration such as personal preferences. When the samples are selected without using probability sampling such as considering other elements in the population are called non-random sampling. Qualitative research usually works with small sample of people, nested in their context and studied in-depth. Therefore, the sampling techniques such as purposive sampling, convincing sampling and snowball sampling are popularly used in qualitative study.

Purposive or Judgment Sampling

The purposive sampling technique, also called judgment sampling, is the deliberate choice of a participant due to the qualities the participant possesses. It is a non-random technique that does not need underlying theories or a set number of participants. Simply put, the researcher decides what needs to be known and sets out to find people who can and are willing to provide the information by virtue of knowledge or experience (Pant, 2010). It is typically used in qualitative research to identify and select the information-rich cases for the most proper utilization of available resources (Miles, Huberman, & Saldana, 2014). This involves identification and selection of individuals or groups of individuals that are proficient and well-informed with a phenomenon of interest. In addition to knowledge and experience, the importance of availability and willingness to participate, and the ability to communicate experiences and opinions in an articulate, expressive, and reflective manner (Etikan, Musa, & Alkassim, 2016). Generally, five types of sampling procedures, that can be used while selecting the informant using purposive sampling (Teddlie & Yu, 2007).

Maximum Variation Sampling

The idea behind maximum variation sampling is to look at a subject from all available angles, to achieving a greater understanding. This method is also known as heterogeneous sampling, it involves selecting candidates across a broad spectrum relating to the topic of study.

Homogeneous Sampling

This form of sampling, focuses on candidates who share similar traits or specific characteristics. For example, participants in homogenous sampling would be similar in terms of ages, cultures, jobs or life experiences. The idea is to focus on this precise similarity and how it relates to the topic being researched.

Typical Case Sampling

It is useful when a researcher is dealing with large programs, it helps set the bar of what is standard or "typical". Candidates are generally chosen based on their likelihood of behaving like everyone else.

Extreme/Deviant Case Sampling

The extreme or deviant case sampling is designed to focus on individuals that are unusual or atypical. This form of sampling is more often used when researchers are developing "best in practice" guidelines or are looking into "what not to do".

Critical Case Sampling

Critical case sampling is a method where a select number of important or "critical" cases are selected and then examined. The criterion for deciding whether or not an example is "critical" is generally decided using the following statements: "If it happens there, will it happen anywhere?" or "if that group is having problems, then can we be sure all the groups are having problems?"

Total Population Sampling

Total population sampling is a technique where the entire population that meet the criteria (e.g. specific skill set, experience, etc.) are included in the research being conducted. Total population sampling is more commonly used where the number of cases being investigated is relatively small.

Expert Sampling

Expert sampling calls for experts in a particular field to be the subjects of the purposive sampling. This sort of sampling is useful when the research is expected to take a long time before it provides conclusive results or where there is currently a lack of observational evidence.

Convenience Sampling

Convenience sampling is a type of nonprobability or nonrandom sampling where members of the target population that meet certain practical criteria, such as easy accessibility, geographical proximity, availability at a given time, or the willingness to participate are included for the purpose of the study (Etikan, Musa, & Alkassim, 2016). Convenience samples are sometimes regarded as 'accidental samples' because elements may be selected in the sample simply as they just happen to be situated, spatially or administratively, near to where the researcher is conducting the data collection (Pant, 2010).

The main objective of convenience sampling is to collect information from participants who are easily accessible to the researcher. Convenience Sampling is affordable, easy and the subjects are readily available. The main assumption associated with convenience sampling is that the members of the target population are homogeneous. That is, that there would be no difference in the research results obtained from a random sample, a nearby sample, a co-operative sample, or a sample gathered in some inaccessible part of the population (Etikan, Musa, & Alkassim, 2016).

Ecological data are often taken using convenience sampling, here data are collected along roads, trails or utility corridors and hence are not representative of population of interest. Other example of convenience sampling include data taken subjectively near camp, around parking areas, or an area where density is known to be high. Biologist often use convenience sampling in the field work because it is easier like walking on a road and stop occasionally to record numbers (Etikan, Musa, & Alkassim, 2016).

Snowball Sampling

Snowball sampling is the process of selecting a sample using network. To start with, a few individuals in a group or organization are selected and the required information is collected from them. They are then asked to identify other people in the group or organization, and the people selected by them become a part of the sample. Information is collected from them, and these people are asked to identify other members of the group and in turn those identified become the basis of further data collection (Kumar, 2012). This process is continued until the saturation point has been reached, in term of information being sought.

Conclusion

The qualitative research approach is growing in social science as well as in another field rapidly. Thus, the basic knowledge should be considering by each beginner while conducting such research work. The philosophy of qualitative research, Primary data collection tool, sampling strategy and sample size normally used in qualitative research are explained in details. Thus, this article attempts to provide the basic knowledge on qualitative research for the beginners.

Reference

Alshenqeeti, H. (2014). Interviewing as a Data Collection Method: A Critical Review. *English Linguistics Research, 3*(1).

Baden, M. S., & Major, C. H. (2013). *Qualitative Research: The Essential Guide to Theory and Practice.* London: Routledge.

Baker, L. M. (2006). Observation: A Complex Research Method. *Library Trends, 55*(1).

Bernard, H. R. (2000). *Social Research Methods. .* Thousand Oaks, CA: Sage.

Bertaux, D. (1981). *The life history approach in the social sciences .* London: Sage.

Boyce, C., & Neale, P. (2006). Conducting in depth interviews: A guide for designing and conducting in depth interviews for evaluation inputs. *Pathfinder International*, 1-16.

Creswell, J. W. (1994). *Research Design: Qualitative and Quantitative Approaches.* Thousand Oaks, CA: Sage.

Creswell, J. W. (1998). *Qualitative Inquiry and Research Design: Choosing Among Five Traditions.* Thousand Oaks, CA: Sage.

Driscoll, D. L. (2011). Introduction to Primary Research: Observations, Surveys, and Interviews. *Writing Spaces: Readings on Writing, 2*, 153-174.

Edwards, R., & Holland, J. (2013). *What is Qualitative Interviewing ?* London: Bloomsbury Publishing Plc.

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics, 5*(1), 1-4.

Freitas, H., Oliveira, M., Jenkins, M., & Popjoy, O. (1998). *The Focus Group, A Qualitative Research Method.* Merrick School of Business, University of Baltimore.

Holloway, I. (1997). *Basic Concept for Qualitative Research .* Oxford : Blackwell Sciences.

Kumar, R. (2012). *Research Methodology : A step by Step Guide for beginners.* New Delhi: SAGE Publications India Pvt. Ltd.

Mason, J. (2002). *Qualitative researching.* (2nd, Ed.) London: SAGE publications Limited.

Mason, M. (2010). Sample Size and Saturation in PhD Studies Using Qualitative Interviews. *Forum : Qualitative Social Research, 11*(3).

Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative Data Analysis : A Methods Sourcebook.* London: SAGE.

Morse, J. M. (1994). *Designing funded qualitative research. Handbook of qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.

Pant, P. R. (2010). *Social Science Research and Thesis writing.* Kathmandu: Buddha Academic Publishers and Distributors Pvt.Ltd.

Ritchie, J., & Lewis, J. (2003). *'Qualitative research practice: A guide for social science students and researchers.* SAGE.

Sargeant, J. (2012, March). Qualitative Research Part II: Participants,Analysis, and Quality Assurance. *Journal of Graduate Medical Education*, 1-3.

Stainback, S., & Stainback, W. .. (1988). *Understanding and conducting qualitative research.* Dubuque, IA: Kendall/Hunt.

Teddlie, C., & Yu, F. (2007). Mixed Methods Sampling: A Typology With Examples. *Journal of Mixed Methods Research, 1*(1), 77-100.

Wilmot, A. (n.d.). *Designing sampling strategies for qualitative social research: with particular reference to the Office for National Statistics' Qualitative Respondent Register.*