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## **Research Methodology: Qualitative Research**

### **Introduction**

Scientific method of research started from seventeenth century with the development of Positivism, post-positivism, and constructivism on the basis of which quantitative and qualitative methods of research were developed. In the 1970s and 1980s paradigm war between quantitative and qualitative methodology started and the existence of qualitative research as a scientific method of research was challenged. In the 1990s qualitative research found solid ground thorough the influence of the philosophical world views such as: Ontology, Epistemology, Axiology, and Methodology. In this era, the two designs of qualitative and quantitative became compatible and mixed methods were emerged. Despite the lack of generalizability and the existence of excessive bias, with the growing of complexity in the social world and the existence of marginalized groups, the qualitative methodology with its flexibility, creativity, and openness can be very relevant and applicable.

Humans have always been in the need to understand the world and as Aristotle stated, “philosophy begins with wonder and by philosophy Aristotle meant science” (Rosenberg, 2001, p.21, as cited in Bruce & Grant (2013). Science and scientific explanation was one response to satisfy this need and to unfold the wonder. Historically, scientific reasoning started with the Greek philosopher Thales; he was famous for predicting the eclipse in 585 B.C and was the first whose idea was scientific as well as philosophical. This outlook was promoted by other ancient

philosophers (Socrates, 469- 399 BC; Plato, 424 - 348 BC; and Aristotle, 384 BC – 322 BC) but remained unchanged up to the sixteenth century (as cited in Bruce & Grant, 2013). The sixteenth and seventeenth century philosophers advanced the scientific method of reasoning to an unprecedented level not seen before in the history. In fact, seventeenth century was the beginning of applying systemic analysis to science, first to natural sciences and later on to social research.

Also, seventeenth century was the era of the philosophical perspectives of positivism and later post-positivism and constructivism. These social research paradigms to a varying degree, were all implicated in sustaining hegemonic social orders. As such, understanding the philosophical and the theoretical foundation of social research contributes to more effective social research. Groat & Wang (2013) suggested a continuum of all known paradigms, in a way that to place “multiple epistemological and ontological positions along the continuum” (p. 76). At one end of this continuum were positivism and post-positivism and at the other end was constructivism.

Amongst these perspectives positivism and post-positivism assumptions were the basic assumptions that were mainly used as a framework for quantitative approach to research. However, the world changed and with the growth of technology it became more complex; direction of knowledge moved away from reductionist policy, deductive reasoning, and positivist worldview. Francis Bacon (1561-1626) was the founder of modern inductive method; he emphasized the importance of induction versus deduction which is used a lot in modern analytical research. Objectivity was refuted by the fact that scientists started to believe that individuals interpret whatever they observe based on their past experiences, their culture, beliefs, and their expectations. The causal effect relationship through prediction of hypotheses did not seem sufficient to resolve the social problems. In many instances there was not a pre-determined

theory on the basis of which a hypothesis could be established or data could not be obtained through observation or available statistical data (as cited in Bruce & Grant, 2013). Besides the deductive reasoning lost its applicability with the development of knowledge on complex theories and emergent that described whole can manifest features distinct from its constituent part. Therefore, what was named qualitative, or field research, became more popular since the latter half of the 20<sup>th</sup> century.

### **1- Qualitative Research**

After methodological struggles of 1970s and 1980s (or paradigm war of the 1980s) in which the existence of qualitative research was challenged, in the 1990s qualitative research found a solid ground (Denzin & Lincoln, 2013). Qualitative methodology was emerged as a new approach to research in contrast with quantitative approach as a necessity to the changing world conditions. It was further advanced thorough the influence of the philosophical world views such as: Ontology, Epistemology, Axiology, and Methodology. The main characteristics of qualitative approach studies such as emerging features, the influence of researchers and participants in the direction of research, and the use of inductive logic are all based on the above mentioned paradigms. Creswell (2013) defined qualitative research as the following: “Qualitative research is multi-method in focus, involving an interpretive naturalistic approach to its subject matter, attempting to make sense of or interpret phenomena in term of the meaning people bring to them” (p. 15).

According to this definition, qualitative research is multi-method and it is not bound to certain established rules regarding data collection, data analysis, and the whole process of research. The second point in this definition is that data analysis and the outcome is subject to the interpretation of the researcher and participants. The final part of definition defines the important

role of participants in this research. In other words, qualitative research not only needs skills, but simultaneously it needs creativity.

Therefore, following this definition in qualitative research, there was no prediction about a relationship between variables at the beginning; a relationship, positive or negative, may be evolved at the end of the study and a mitigating remedy might be recommended. Moreover, in qualitative research nothing was absolute and set from the beginning; this was the basic definition of an interpretive and naturalistic approach (Creswell, 2013).

The researcher has an idea that will be further developed into a research question that is evolving and changing constantly. Outcome of research is a process rather than a product, because the whole procedure works as an interrelated system. Moreover, the researcher who is fully involved in data collection designs open ended questions so that participants can express their feeling freely about the subject matter; the participants can add to the quality of research with the content of their answers in interviews. Interviews that are performed in natural setting give power and flexibility to the participants to express their knowledge on the subject matter and to add value to the outcome of research (Creswell, 2013).

Data analysis in qualitative research, in contrast to quantitative research, is subject to categorization and interpretation of the researcher. Also, the report writing in qualitative research is more detailed, more persuasive, and follow strong reasoning. The final stage in a qualitative research is standard of quality, verification of validity and reliability of research and the researcher should rely on ethical principles, to get written consents, and maintain confidentiality. Also, qualitative inquiry is time consuming and the researcher should rigorously collect data, words or picture, analyze them inductively, from particulars to more general

perspectives, making sense of the data, categorize the data into themes, dimensions, and codes as well as, interpret the phenomena with the focus on the participants meaning (Creswell, 2013).

### **Different Designs in Qualitative Research**

Research approaches encompass the plans and the procedures for research from broad assumptions to detailed methods of data collection, analysis, and interpretation (Creswell, 2013). This procedure can be divided into three distinct parts: -The assumptions and the underpinning philosophy the researcher brings to the study, the procedures of inquiry or research designs, and specific research methods of data collection, analysis, and interpretation. Since 1990s, the qualitative research became more popular and various approaches were developed; Wilcott (2001) identified 19 different strategies for qualitative research. As a result different approaches to qualitative research were developed: Narrative research (Clandinin & Connelly), phenomenological approach (Moustakas), grounded theory (Strauss and Corbin), ethnographic approach (Wilcott) and case study approach (Stake) (as cited in Creswell, 2013).

### **Narrative Approach**

Narrative research is a design of inquiry specifically for studying the lives of individuals; it is in fact about the stories of life through story telling either by the researched or others about the researched (Creswell, 2013). Data is collected through gathering stories, reporting individual experiences, and other documents about individuals' lived and told experiences. To gather the data, the primary source is interviews, that is set up either individually or as a group, observations, documents, pictures, and other sources of qualitative data can be used (Creswell). There is a strong collaboration between the researcher and the researched in producing these sources. Data analysis can be Thematic, structural, or dialogic/ performance and narrative stories

often are formed into chronology (Riessman, as cited in Creswell, 2013). The end-product of a narrative research is a fusion of the views from the participant's life and those of a researcher's life in a collaborative and narrative form (Clandinin, & Connelly, as cited in Creswell, 2013).

Narrative study seemed simple, but it required detailed work in data collection, data analysis and forming themes and final writing. Data might be gathered from participants' journal, memo, photographs, and other personal- family- social artifacts as well as researcher's observation of the individuals, stories told about the individuals by family members, and other official correspondence about the individuals. In addition, all the information about life experiences of participants should be recorded, to be examined, and to be interpreted by the researcher (Creswell, 2014). The most common use of narrative study is biographical study in which, the researcher writes and records the experiences of another person's life. A life history portrays an individual's entire life, both personally and socially and the researcher is looking for the turning point in an individual's personal experience. In other words, the researcher studies not only other people's life and their experiences, but the impact they had socially on their societies. However, in autobiography people write about their own life.

### **Phenomenological Approach**

Phenomenology is a design of inquiry in which the researcher describes the experiences of individuals about a phenomenon as described by the participants. In other words, the researcher seeks for the common meaning of a phenomenon captured from the live experiences of several individuals. The basic tenacity of phenomenology research is to capture the essence of several individual experiences with a phenomenon in order to "grasp of the very nature of the thing," (van Manen, p. 177 as cited in Creswell, 2014, p.76). The researcher collects data from persons who have experienced the phenomenon by interviewing them and asking questions about

their experiences. The phenomenology was developed after the world was dominated by empirical science and the search for wisdom or philosophy without presuppositions.

In phenomenology, the researcher does not interfere in research and stays independent; this named “*epoche*” by Husserl (as cited in Creswell, p.77). Therefore, individuals both have the subjective experiences of the phenomenon and objective experiences of something in common with other people and this refutes the subjective- objective perspective dichotomy. The problem in phenomenological research is that researcher may not be able to focus solely on the participants’ experiences in the description without bringing himself or herself into the picture. This is due to the researchers’ past knowledge (Giorgi, 2009, as cited in Creswell, 2014). As such, phenomenology is considered both a methodology and a philosophy (Moustakas, 1994 as cited in Creswell, 2013).

Data collection in research of phenomenology is through interviewing those who experienced the phenomenon. Other phenomenological sources of data are poems, observations, and other documents. Interviews are in depth and a limited number of participants from 5 to 25 interviewees are recommended (Polkinghorne, as cited in Creswell, 2013). Other sources of data collection are: Observations, taped conversations, journals, poetry, and music (Van Manen, as cited in Creswell). Data analysis is extensive starting from detailed descriptions that would categorize into two broad categories on “what the individuals have experienced and how they have experienced it” (Moustakas, as cited in Creswell, 2013, p.79).

### **Grounded Theory**

Grounded theory is a qualitative research design of inquiry in which the researcher derives a general, abstract theory of a process, action, or interaction grounded in the data

captured by views of participants. This process involves using multiple stages of data collection and the refinement and interrelationship of categories of information (Charmaz, 2006). The key here is that the grounded theory is generated or grounded in data that is captured from participants in the research. There are many definitions of a theory available in the literature, but, in general, a theory is an explanation of something or an understanding that the researcher develops. The important point in grounded theory is the combination of inductive, deductive data analysis in which the researcher gathers the data, analyze them, and formulates the process as it is seen by the researcher. Then, the researcher compares the ideas about the emerging theory with the data obtained from participants, and refines the research questions if necessary. The process consists of going back and forth between the participants, gathering new interviews, and then returning to the evolving theory to fill in the gaps and to elaborate on how it works. Therefore, data collection and data analysis are structured as evolving open categories and the researcher selects one category and then additional categories in order to formulate a theoretical model (Creswell, 2014).

There are many approaches towards grounded theory, the two often used ones are the systematic approach (Strauss and Corbin, as cited in Creswell, 2013) and the constructivist approach (Charmaz, 2006) . In the systematic approach, the researcher attempts to develop a theory that explains the process, action, or interaction on a topic. In this case, the sampling is theoretical sampling because, the researcher aims at selecting for the best theory that fits the research. This method of data collection that is constantly comparing the result with the emerging categories is called the constant comparative method of data analysis (Creswell, 2014). The selective categories are the ones that are relevant for explaining the core phenomenon and after this selective coding the researcher selects the model, develops the propositions (or

hypotheses), and interconnects different categories of the model. The theory that is constructed at the end of research by the researcher can take the form of a narrative statement (Strauss & Corbin, 1990), a visual picture (Morrow & Smith, 1995), or a series of hypotheses or propositions (Creswell & Brown, as cited in Creswell, 2013). Moreover, Strauss and Corbin (1998) constructed a conditional matrix as a coding device to assist the research in grounded theory by making connections between the macro and micro conditions influencing the phenomenon.

### **Ethnography**

Ethnography historically is created to study about remote areas and is related to the era of colonialism (late nineteenth and early twentieth centuries). The traditional definitions of ethnography is learning about the customs, culture, language, and pattern of living of a social group by living among the group and gathering data through interviewing, observing, and whatever material that could help to define and articulate the distinctive features of the group (Creswell, 2014). However, ethnography has been shifted from its original roots and currently has become a research which is based on observation. With the popularity of observation as an effective tool of research in marketing, advertising, and fashion, ethnography has been and will be used more often in research (Silverman, 2011).

Traditionally, ethnography is defined as a design of inquiry that study “the shared patterns of behaviors, language, and actions of an intact cultural group in a natural setting over a prolonged period of time” (Creswell, 2013, p.90). In this sense the ethnographer studies the whole sharing group which is typically large. There are two types of ethnography in the literature: The realist and critical. The realist ethnography resembles the traditional approach of shared culture and is used by cultural anthropologists (Van Maanen, as cited in Creswell, 2013).

On the other hand, the critical ethnography is concerned about emancipation of marginalized groups (Thomas, as cited in Creswell, 2013). According to critical ethnography, ethnography research includes a value- laden orientation that can empower people. Therefore, a critical ethnographer is concerned about the issues of power and inequality in the research. However, sometimes the researcher prefers to observe the participants from a distance without interacting with them because, they do not want to influence the participants' behavior (Silverman, 2011).

In order to select the design of ethnography for a research, the researcher must identify and locate a culture- sharing group. This group should have lived together for a long time, as well as share one language and one patterns of living. Moreover, the group should be accessible and there should be a setting and gate keeper to allow the researcher in. Data usually is gathered in the site and through fieldwork and the daily life of individuals. Data collection is by interviews, other documents, and researchers' observation. Then, the researcher analyzes the data and themes are generated from the group and researcher's overall interpretation (Wolcott, as cited in Creswell, 2013). Thus, the final outcome is a "holistic cultural portrait of the group that incorporates the views of the participants' *emic* as well as the views of the researcher *etic*" (Creswell, 2013, p.92).

### **Case Study**

Case study research is a detailed analysis of a case that was bounded by time and activity; the case could be "a program, event, activity, process, or one or more individuals" (Creswell, 2014, p.14). Researchers collected detailed information through numerous data collection procedures over a long period of time (Stake, as cited in Creswell, 2013; Yin, 2009, 2012). In case study research with a qualitative approach the researcher seeks to explore a real-life problem within a bounded system through gathering detailed data with multiple sources of

information such as interviewing, observations, audiovisual material, and other documents. Case study also, can be explanatory and is used with quantitative approach or be descriptive qualitative (Yin, 2012).

According to Yin, case study research may be used for the study of a case such as an individual to the study of an organization and a community; it can also investigate a relationship or a specific project (Yin, 2012). The intent of conducting a qualitative case study is to illustrate and describe the case in full detail or an intrinsic case. If the intention is to understand a specific issue, problem, or concern, it is called an instrumental case (Stake, as cited in Creswell, 2014). Yin asserted that both unit of analysis, or case, in case study research should be defined and bounded. He suggested that as a general guide, the tentative definition of a case in case study research should be related to the way that research questions are defined. He then, expanded the definition of a case, on the basis of research questions, to macro topics such as country's economy or an economic policy (Yin, 2012).

The researcher needed to acquire good amount of data to be able to conduct a full detailed analysis of a case in order to understand and provide a good description of the case and to identify themes or issues that were uncovered in the case. Case studies often ends with conclusions about assertions, explanations, or lessons to be learned from studying the case(s) (Stake, as cited in Creswell, 2013). Data collection in case study is from multiple sources such as interviews, researcher's observations, and other documents (Yin, 2012). The type of data analysis depends on whether the research is based on a single case or multiple cases; in multiple cases, the analysis could be within case analysis or across cases (Yin, 2012).

### **Purpose, Problem, and Questions in Qualitative Research**

Purpose statement must state clearly the main objective or intent of the study. Purpose statement should reveal the necessity of the research and the reason that this research is undertaken. Purpose statement in a qualitative research like any other type of research starts with a problem or issue leading to the study and then explains how the issue can be solved. In quantitative research the purpose is to find a causal or correlational relationship between two variables. In contrast, in qualitative research the purpose of research most of the time is to heighten the awareness and opening of the argument about an unknown issue. In qualitative research, there is no prediction about a relationship between variables at the beginning and a relationship, positive or negative, may be evolved at the end of the study and a mitigating remedy might be recommended (Creswell 2014).

Also the process of data collection, field and site of research, sampling, population, participants, data analysis, and delimiting factors should be explained completely in purpose statement. The question is where the ideas came from? The ideas are concepts that researchers have captured due to their own experiences or studies of past literature and so on. Historically, the concept of research is in alignment with knowledge and ideas are researchable as long as they add to the body of knowledge in the field. However, in contemporary studies what is important is the purpose of research that is rooted in the unique conceptualization in the researcher's thinking about the study. In other words, the purpose is the "rationale", the "aim", and "objective" of the research study and drives research questions. Purpose of research can change over the course of research and it changes the research questions as well. Purpose of research is the reason for the researchers to decide whether research is worth doing (Newman, et al, as cited in Creswell, 2013).

In qualitative inquiry, research ideas mainly come from problems that need to be solved either to increase efficiency and productivity in society or mitigate a problem. Of course, every research would somehow add to the body of knowledge in the field, otherwise there is no purpose behind the research and the research is not worth pursuing. Moreover, big ideas must be narrowed down and to be transferred into questions for transfer of conceptualization into operationalization. In other words, the concept and ideas to be put into a form to be applicable in objective cases. Therefore, it is obvious that there is an inseparable connection between purpose, problems and questions in every research in social sciences.

Questions restate the purpose of study in more specific terms Creswell, suggested that the entire study to be reduced to a single, overarching question and several sub-questions. The overarching question is the main question or “broadest question the researcher could possibly pose about their studies. The researcher also should ask a few sub questions that are divided into two categories of issue questions and topical questions. Issue questions address the major concerns and “perplexities” to be resolved. Topical questions cover the anticipated needs for information (Creswell ,2014). Research problem, research questions and purpose of study can be framed in conceptual framework of the research. Research questions both are generated from the goals of study and guide the researcher towards the methodology of research (Miles & Huberman, as cited in Creswell, 2013).

Research questions must not be confused with the purpose of the study and they should be outlined in a way to guide researchers towards the information and the understanding that would help researchers to achieve their practical goals of the study (Maxwell, 2013). Moreover, research questions should not be confused with questions in interviews. Whereas research questions identify the things that you want to understand, interview questions are designed to

generate the data for the study in order to understand research questions. According to Maxwell, there should be coherence between practical goal or policy implication of the issue of research, intellectual goal or understanding of the issue of research, and research questions. However, in qualitative research questions should be considered tentative and might evolve and develop over time. Research questions in qualitative research are open-ended, evolving, and non-directional. This means that the researcher might modify and change the questions in the course of research after analyzing the participants' answers to the questions. Research questions in qualitative research start with words "what" or "how" which is different from quantitative questions that start with the word why (Maxwell, 2013).

## **Theory and Conceptual Framework in Qualitative Research**

### **Theoretical Framework**

The role of theory in qualitative study and the use of theory in formulating the research or what is called theoretical framework have been discussed widely by scholars in this topic. If we define the theory as identifying two variables that are interrelated, most of qualitative research projects incorporate it in their research. However, researchers may not have access to the known theories and formulate their research on the basis of concepts that inform the research goals and the presumed relationship among them. The reality is that in planning most qualitative inquiries, there is the use of both concepts and theories, but the question remains as how much theorizing or how much conceptualizing. According to Knight (2014), there is a continuum of inquiry and thus the theoretical base of the project depends where in the continuum the research is located and that depends on the amount of theory or concept used in formulating the research.

Creswell (2014) stated that use of theory in qualitative research is either up-front, at the end point, or as a lens that gave direction to the research. He suggested that in qualitative research like quantitative research, theory is used as “a broad explanation for behavior and attitudes, and it may be complete with variables, constructs, and hypotheses” (p.64). Also, researchers use their own perspective that might be captured from their own experiences or existing theories and orient the research towards marginalized groups. This is the base for a transformative perspective that decides on the types of questions asked, how data are collected, and are analyzed. Moreover, in qualitative research, there are end point theories which are grounded theory (Strauss & Corbin,) and pattern theories (Lincoln & Guba, as cited in Maxwell, 2013). Grounded theory is a process of generating a theory and it consists of procedures in which both induction and deduction principle is used in order to generate the themes inductively and refines the methods and data constantly to get the optimum result.

### **Conceptual Framework**

Conceptual framework is defined as “the system of concepts, assumptions, expectations, beliefs, and theories that support and informed the research” (Miles & Huberman; Robson, as cited in Maxwell, 2013, p. 39). In other words, in conceptual framework the main things to be studied including concepts, variable and constructs, and the assumed relationship among them are presented in visual or written forms, graphically or narrative (Miles and Huberman). According to Maxwell, conceptual framework is a model or a tentative theory that informs the rest of research design and it helps to refine the goals, to develop appropriate questions, and to select appropriate methods. Therefore, conceptual framework is something that is constructed, not found and although bits of pieces from elsewhere could be collected, but the structure and the overall consistency of different component of research is built by the researcher. In this process,

he recommends the use of existing theories and research that are in the same topic and the experiential experiences of the researcher. The important point in this design is the coherence and hegemony between what is designed in conceptual framework including research questions and the rest of the research, or operationalization. These three are so closely tied that if there is any change in one of them, the others should be refined accordingly (Maxwell, 2013).

However, goal or purpose in the study is part of a bigger analysis in the research which is outlined as conceptual framework. Conceptual framework includes theories, researchers' beliefs, and prior research findings as well as the literature, preliminary studies, and personal experiences of the researchers. Maxwell (2013) includes problem statement or the core question in the research in the conceptual framework. In this case everything outside the operational side of research is included in conceptual framework. Thus, the most part of conceptual framework for the study is a model or theory that is generated for research thorough the analysis of conceptual framework. Nevertheless, in qualitative research the initial model or theory is tentative and will be refined later during the research. This tentative theory will guide the researcher through the whole process of research, will assist with assessing and refining research's goal, will help to develop realistic and relevant research questions, will help to select appropriate methods, will assist the researcher to identify potential validity threats to the research.

### **Data Collection in Qualitative Research**

Data collection in qualitative research is more than merely gathering information and it encompasses all of the activities that are interrelated and aim at capturing the appropriate information in order to find answers to research questions (Creswell, 2014). Creswell numerated

the activities as: Locating a site or an individual, gaining access to the site, making rapport with the participants, conducting a sampling strategy, collecting data, developing means for recording data, and to store data as well as, gaining the permission and consent from participants and being cautious about ethical issues. Then, the researcher must select the most appropriate data collection approaches that fit the research question in the study. Also, there is unanticipated issues regarding the fieldwork that appears in the middle of data collection; these issues are not having enough data, lost information, and ending the fieldwork prematurely because of financial difficulties or ethical issues.

Finally, a qualitative researcher has to deal with storing data in a safe place to be accessible easily and to be protected from damage or loss. Yin (2009) counted six sources of evidence in qualitative research: Documentation which is mainly recommended with the studies like case study; archival records, such as computer files and records in US census data; interviews which are targeted and insightful, like to guide conversation and not to be structured; direct observation that captures actions in real time; participant observation that goes deep into interpersonal behavior; and physical artifacts that capture the insight of the culture. Yin recommended the use of multiple sources of evidence in particular for case studies.

### **Sampling Strategies**

The first step that a researcher should take in qualitative inquiry is to select people or places to study and to decide on a strategy for sampling. Contrary to quantitative studies that are involved with large population and probability sampling that enables a researcher to determine statistical inferences to a population in order to generalize the outcome, in qualitative research the sampling strategy for individuals or sites are purposeful. In other words, the researcher in qualitative research intentionally selects a sample a group of people that can best inform the

researcher about the research problem under examination and know well about the phenomena under study. Thus, the researcher needs to determine which type of purposeful sampling will be best to use (Creswell, 2013). In other words, in purposeful sampling the study will illuminate the questions under study; it is also called purposive or judgment sampling (Bernard, , cited in Creswell, 2014).

Therefore, sampling in qualitative studies is purposeful because the researcher aims at selecting a few informants who knows well about the phenomena under study. This is on the contrary with probable and random sampling that its aim is generalization from a sample to a population. The logic of purposeful sampling is the study in depth to learn a great deal about the issues of central importance to the study.

Sampling can be continuous or fixed interval sampling, for example, time sampling is particularly important because programs, organizations, and communities may function in different ways at different times during the year” (Patton, 2002, p.229). Patton stated that the criterion of usefulness determines what data to be collected and during what time period that most likely will provide good, efficient answers to research questions. Patton enumerated fifteen different types of sampling as follows.

(a) Maximum variation sampling applies where the researcher aims at capturing central themes that cut across a great deal of variation. Maximum variation sampling is a kind of sampling in which the purpose is to capture and describe the central themes that cut across a great deal of variation. The researcher in maximum variation sampling decides on the sites or participants that are quite different according to some pre- determined criteria. This approach has

the advantage that maximizing the differences at the beginning of the study, increases the likelihood that the findings will reflect different perspectives.

(b) Homogeneous sampling is used where the researcher seeks a homogeneous group that knows the phenomena under study in depth. Homogeneous sampling strategy is selecting a few individuals who have ample knowledge about the issue under study; homogeneous sampling is often used in focus group interviews. The group is formed from people of similar background and experiences to participate in a group interview about major issues that affect them. The focus group interviews are based typically on homogeneous sampling which are typically used in research on organizations and involve open ended interviews with five to eight participants who are specialized in the issues under study. The primary goal of focus group is to get to a richer, thicker, and more levels of understanding about the issue and capture their knowledge collectively on an issue (Patton, 2002). Focus groups allow for capturing multiple meaning and perspectives of the participants, as well as the interaction between those perspectives (Denzin, 2013). Focus groups have become more popular with the use of internet (Krueger & Casey, Stewart & Williams, cited in Creswell, 2013). They promoted the use of focus groups on the Internet and chat room, as well as the use of internet for focus groups in social science, both synchronous ( real- time) and asynchronous ( non- real- time).

(c) Theoretical sampling is used by grounded theorists as an appropriate method of sampling for constant comparative method of analysis; that is, systematically examining and refining variations in emergent and grounded concepts. Theory based sampling is a purposeful sampling in which the researcher will pick the samples that can help in formulating a theory; this is typically used in grounded theory. It is defined by grounded theorists as a sampling strategy

which is used in the constant comparative method of analysis; that is, it systematically changes along with the examining and refining variations in emergent and grounded concepts.

(d) Opportunistic sampling is where a sampling is done in the fieldwork in order to take advantage of new opportunities during data collection. Opportunistic or emergent sampling is a sampling decision that is taken spontaneously in the field to use the new opportunities that comes up during data collection.

(e) Convenient sampling is the sampling that is selected on the basis of convenience by the researcher (Patton, 2002). Convenient sampling strategy is the selection of cases by the researcher on the basis of convenience; that is, whatever is faster and more convenient (Patton, 2002).

(f) Extreme group sampling that illuminates sampling of the unusual; that is, due to limited time and limited resources the researcher will go through the cases that s/he could learn the most from and would select those cases for study.

(g) The intensity sampling in which the researcher selects the excellent or rich examples of the phenomena, not necessarily at the extreme; this kind of sampling involves some prior information and considerable judgment (Patton, 2002).

(h) Typical case sampling is another type of sampling strategy in which the researcher selects a couple of cases for in depth analysis of the issue; this is done with the help of informants who can identify who can be a typical case in the inquiry.

(i) Critical case sampling strategy is the one in which cases are selected which are for some reason important in the inquiry.

(j) Snowed ball or chain sampling is an approach in which information is located by the key informants on who knows a lot about the issue under study; or later the researcher can ask a number of people about who else to talk to; this will go on as a snowball and therefore, the researcher can accumulate new information about the issue under study (Patton, 2002).

(k) Criterion sampling strategy is the one in which the researcher preview all the cases and pick the ones that meet some predetermined criterion of importance.

(l) Confirming and disconfirming cases sampling strategy in which the researcher looks for cases that either confirm or disconfirm the ideas.

(m) Stratified purposeful sampling strategy is based on samples within samples in which two different types of sampling are used. For example, a researcher might combine typical case sampling with maximum variation sampling.

(n) Purposeful random sampling is a purposeful sampling with randomly selected cases.

(o) Sampling politically important cases is to study the cases that are politically important.

In a good plan for a qualitative study, one or more of these sampling strategies must be used; among these methods maximum variation sampling is a popular approach in qualitative studies, because by maximizing difference, the outcome of research will reflect different perspectives and that will add to the validity of research. The other sampling strategies that are typically used in qualitative research are critical sampling and convenient sampling.

## **Sample Size**

Since the purpose of research in qualitative studies are not generalization, but deep analysis of a phenomenon, there is no particular rule for sample size; sample size depends on the purpose of inquiry and the credibility of findings, and also the available time and resources. What researchers seek in qualitative studies is the in-depth analysis of a phenomenon and that can be achieved by the richness of the cases selected and the expertise of the researcher, not the sample size. Lincoln and Guba (1985) recommended sample selection “to be of redundancy; that is, the sampling is terminated when no new information is forth coming from new sampled units; thus redundancy is the primary criterion” (p.202, as cited in Creswell, 2013, P.246). However, sample size question which is a part of sampling strategy in the data collection process of a research is important. In qualitative studies when site or cases are selected there should be an extensive data collection about each site or the individuals studied. Therefore, contrary to quantitative studies in which the number of samples is important, because the purpose is generalization, in qualitative studies the size does not matter, the depth, peculiarity, and specificity is important (Pinnegar & Daynes, as cited in Creswell).

## **Data Sources in Qualitative Research**

### **Interviewing**

Interviewing which is an important component of qualitative research is about the communication and joint understanding between two people in order to capture the meaning of a phenomenon (Janesick, 2011). Steps for interviewing are deciding on research questions, Identifying\* interviewees and determining the type of interview that is best suited for the research (Creswell, 2013). Interviews must be effective in a way that to capture the most and best

quality information for the research. The effectiveness of interview starts from selecting the site, the particular location that actually interview takes place, the interviewee's body language and verbal language, the type of start-up and follow up questions from interviewee. In order to use efficiently the interview time, the interviewee must feel the atmosphere of trust and belonging; s/he must be engaged in conversation and must feel that there is a positive outcome through this interview that can be used to improve the area of her/his interest. I will define best practices as whatever is necessary for achieving an effective interview.

Therefore, the followings are the interviewer best practices in an effective interviewing: Appropriate rapport between interviewer and interviewee; to develop a sense of trust and engagement for interviewee; to ask open-ended questions and relevant follow-up questions; do not bore the interviewee and keep her/his excited about the subject. Therefore, Interviewer must be knowledgeable and professional in designing the questions; presenting herself to the interviewee as a professional by appropriate greeting, body language, and verbal language; and by identifying the social positive impact of her/his project.

Interviews, one to one or group interview, are the most important sources of data collection in qualitative research. Interviews in qualitative enquiries are typically unstructured; that is they might take the form of conversation between interviewer and interviewee and unexpected questions may be raised. However, the interviewer needs an outline described in research questions as a guide to direct the interview at all times towards the issue of research. Yin (2011) stated that the researcher has two jobs to follow during interview: One is to follow her/his line of inquiry; the other one "to ask the conversational questions in an unbiased manner that also serves your line of inquiry" (p.110). Yin named these as level 1 and level 2 questions; where level 1 should satisfy the line of inquiry and level 2 are considered to be the friendly and

nonthreatening questions in an open ended form for interviewees. Therefore, level 1 questions are the ones that show up in the protocols; level 2 are interview questions.

Thus, due to this double nature of functions for interviewers, there is the possibility that the interviewer would influence the findings of the interview by inappropriate wording of interview questions; Yin called this “a methodological threat” which is created by the conversational nature of the interview. He explained that Yin asserted that the interview questions should be worded in a way that the interviewer should appear “naive about the topic and allow the interviewee to provide a fresh commentary about it” (P.110). He also talked about a mutual influence between the interviewer and the interviewee, called reflexivity, in which not only the interviewer’s perspective unknowingly influence the interviewee’s response, but the interviewee’s responses also unknowingly influence the researchers’ line of inquiry; to avoid this, having an interview protocol is necessary.

### **Protocols**

Protocol is a guide for the researcher and is a written form for recording the information in regards with data collection, interviews, questions, and observational information. The interview protocol should include the names of the persons who are in schedule for interview; the issues to be covered in interview; and the questions to be asked as well as the idea behind the research project; the planning procedure; and full description whether the research has been supported by legal authorities. Moreover, the protocol should be a guide for the researcher in the interviews; therefore, the research questions in protocol are for reminding the researcher about the subject matter of research, not to be asked from interviewees (Yin, 2009).

The protocol typically includes: Gaining access to key organizations or interviewees; making a clear schedule of data collection activities; and providing for an unanticipated events. The questions in the protocol consist of a few broad questions that reflects the main issue of research and must be in line with research questions. The protocol questions are not designed to be directly asked in interviews; these questions are designed to remind the researcher of the big issues of the research in interview setting. These questions reflect the actual line of inquiry; show the general orientation of the research; are there to remind the interviewer of the information that needs to be collected and why needs to be collected; in other words, these questions are for the interviewer to stay on track as data collection proceeds. Protocol questions should not be used as the literal questions to be asked of any given interviewee.

Besides, in the cases that data collection is not a controlled process, such as case study, the nature of question is open ended, and an interviewee may not cooperate in sticking to interviewer's line of questions, the protocol will act as a guide to interview. Protocols should include: Gaining access to key organizations or interviewees, making a clear schedule of data collection activities, and providing for an unanticipated event. Moreover, protocols consist of a few broad questions that reflects the main issue of research and is in line with research questions. The protocol questions are not designed to be directly asked in interviews; these questions are designed to remind the researcher of the big issues of the research in interview setting, in observation and in the whole procedure of the research.

### **Interview Questions**

The aim in interview question is to produce a response from another person, the interviewee. The way that interview questions are worded will affect the interviewee's response

(Patton, 2002). Patton stated that good questions should be “at minimum open ended, neutral, singular, and clear” (P.353). In order to elicit the appropriate response from interviewee, the researcher can design questions on opinion, feeling, knowledge, and background of the interviewee. In qualitative research the goal is to capture the perspective of the interviewee in a neutral setting. Therefore, interview questions must be open-ended so that people can talk and express their opinion easily. In this regard, according to Patton, interview questions must start with “what” or “how”.

The researcher should avoid the questions that create “dichotomous” answers; these kinds of questions will turn the interview into quiz instead of in-depth conversation. Moreover, interview questions must be singular, clear and understandable by interviewee. “Unclear questions can make the interviewee “uncomfortable, ignorant, confused, or hostile” (Patton, 2002, p.361). Besides, the interviewer should be prepared for follow-up questions: These questions are used to get a deeper response from interviewee; they are conversational, and typically start with “when”, “who”, “where”, or ‘what”. There should also be the final or closing question which is asking for the final word from interviewee; in this case your question can be like: “anything you care to add” (p.379).

### **Participant Observation**

Observation is considered as one of the key tools for collecting data in qualitative research. Participant observation is a method of data collection in which a researcher takes part in rituals, daily activities, interaction and event among a group of people. In other words, Participant observation allows collection of data by the researcher where the action is (Bernard, 2006, as cited in Dewalt & Dewalt, 2011). Researchers may obtain data from physical setting,

conversations, activities, and interactions among participants; they do that by using their senses, including “sight, hearing, touch, smell, and taste” (Creswell, 2013 p. 166). What is important in this method of data collection is recording the observations or the field notes in a way to give the right perspective for the research and to provide context for interview questions. Malinowski who was known as inventing a method and a theory (functionalist theoretical perspective) for participant observation emphasized on everyday interactions among participant in a way that the total field of data collected by the observer must fit together and makes sense (as cited in Dewalt & Dewalt, 2011).

Although experiencing the data first hand through observation by the researcher is a big plus in the research and researchers can watch the participants over a longer time period and capture their pattern of behavior, there are some limitations to the quality and credibility of data collection through observation. In observation the researcher can establish a direct relationship with participants and in a sense can capture the essence of their activities outside the formalities; that is, during breaks, over meals, in the late night gatherings and parties” (Patton, 2002, p.262). In regard with limitations, the researcher must fit in the active setting, be good in memorizing and writing notes, and to disengage from the site, when necessary.

### **Non-Participant Observation**

Non- participant observation consists of focused and open observation. The similarity between these two cases of observation is that in both of them are nonparticipant observations; that is, and outsider observe a setting with no interaction between the observer and the observed. Whereas, the observation is free from researcher- participants’ bias, nevertheless, it limits the learning from observation. Thus, in order to get the best quality research in both of these cases, the observer has to be meticulously detailed looking, up to the point, and cautious in

interpretation. As far as differences are concerned open observation is opting to less information and more presumption; therefore, the analysis in open observation which is mainly on the basis of static context and environment requires more interpretation than the focus observation. Also, because, there is no direction set in open observations, it is harder to interpret, analyze, or conclude about a theme or pattern in open observations than it is for focus observations. The best practices that I would like to use in my future observations are: to look in depth, to interpret with less bias and to be concern about the limitations in both of these observations. Moreover, as always, whenever a researcher has to include her/his interpretation in a research s/he has to be self-aware of her/ his personal attributes that might bias the concluding results of observation. Moreover, Photographic material is part of data collection for biographies and some scientists treats photographs as objects with a 'social life' specifically in researching domestic family photographs (Rose, 2007, as cited in Silverman, 2011).

### **The Bias in Observation**

It is postulated that "all researchers and research are biased" (Dewalt & Dewalt, 2011, p. 93). Then, the question is how much the research and the researcher is biased? Thus, it is to the researcher to examine her/his biases in a reflexive way before, during, and after research. The theoretical position of the researcher and research questions are the first sources of bias in the collection of data through observation. Also personal attributes of the researcher can influence participant observation in the field research. Other constraints include gender, age, the training and experience, ethnic background, language ability, and the theoretical background of the researcher in observational research. Therefore, the same event can be reported differently when it is written by two different observers with two different personalities.

Moreover, the researcher is the one who writes the field note on a daily basis and decides what to put in the field notes, what level of detail, and how much context to include in the field notes. Thus, it is obvious that bias-less observation is difficult to reach and “all observation is partial” (Agar, 1996; Wolcott, 1999 cited in Dewalt & Dewalt, 2011). Miles, Huberman & Saldana (2014) noted the biases that stem from researchers’ effect on the site (type 1 bias) and the biases that stem from the effects of the site on the researcher (type 2 bias). They asserted, the mere presence of the observer in the research site will cause a bias, because the researcher would create “social behavior in others that would not have occurred ordinarily” (p.296). Moreover, at the outset participants usually go to the mood of on-stage role as they presented themselves to an outsider, the observer.

### **Journal Writing**

Journal writing, or writing down our thoughts in a daily journal, will illuminate the hidden relationship between our thoughts; in other words, dots will be connected and would form a continuous line that is meaningful. In other words, the researcher perceive the surroundings through the stimulation of sensory neurons in the form of seeing, hearing, touching, smelling, and tasting (Newell,1990) and perception would entail not only sensing things but also making the relationship between things as well (Boeree, 2003). On the basis of these As a researcher, journal writing will help to remember the events; to be more detailed looking, refine the material that I wrote; think deeper about shaping the themes and categorizing; and have more appropriate material for writing the final report. Moreover, what is important in reflective journal, specifically for research purposes, is going back to the notes and review what is written. Moreover, journal writing gives a chance to a qualitative researcher to be flexible and to be prepared to modify questions, settings, and all elements of research at any time if appropriate.

Journal writing by qualitative researcher would lead to new questions, and in interactive journal writing with participants will help the interpretation and analysis of data. Janesick stated that interactive journal writing will raise awareness about society, social justice, and responsibility (p.155). Besides, journal writing by qualitative researchers will help them in keeping their observation in detail; to remember and better interpret the data after interviewing; be more prepared in writing the final report; to have more proof of validity and reliability through the documentation and it authenticate the research data (Jansick, 2011).

## **Data Analysis in Qualitative Research**

### **Coding Structure and Strategies**

The initial step in qualitative analysis is reading the interview transcripts and listening to interview tapes prior to transcription. There are three steps that the researcher has to go through: Writing memos, categorizing, or coding and thematic analysis, and connecting strategies (Maxwell, 2013). However, in general, there is no definite outline for doing all this; coding, and the whole strategy of qualitative analysis should be individually planned and modified to fit the data and to answer the research questions. In the process of coding, there should be a distinction between similarity and contiguity relations (Maxwell & Miller, 2008, cited in Maxwell, p. 106). Therefore, coding is rearranging the data into categories (Strauss, 1987, p. 29, cited in Maxwell, 2013) in order to either facilitate the development of theoretical concepts or to organize the data into broader themes and issues. Categorizing starts by reading the text and writing memos on what is important or meaningful in the text. Since it is the researcher who decides on what is important in the text on the basis of her/ his research question, two researchers may end up with two different coding by analyzing the same raw data.

Since the qualitative data are text-based, the corner stone of analyzing these data is the coding process. Codes according to Miles and Huberman (1994) are “tags or labels for assigning units of meaning to the descriptive or inferential information compiled during a study” (p.56). Alternatively, the researcher could use the highlighting function in the word processor to highlight the text he or she is interested in, once more a different color for each interviewee and then bring them together in an electronic file (Miles & Huberman, 1994; Marshall & Rossman, 1990). This task in most of the cases actually is muddled, vague and time-consuming process. These issues can be addressed by data management software such as NVivo.

### **The Use of Computer Software in Coding**

Whereas in hand-coding the knowledge, skill, and the creativity of the researcher is of utmost importance and s/he should work diligently, scientifically, and artistry to mold interviews, observations, and field notes into findings (Patton, 2002, 2011), in the computer assisted programs the researcher can get help from the software in managing, organizing, and coding the data; one software that is typically used in analyzing data in qualitative research is NVivo. This software is easy to use and has several features that could assist researchers in analyzing data including: 1- Managing the data through collection of all data and recording the researcher’s analytical thought in one place; 2- sharing the project in NVivo server in a way that two researchers can work on the same project at the same time; 3- importing all sorts of documents including databases, spreadsheets, PDFs, pictures, audio, and video, or; 4- importing data from applications such as EndNote, Zotero, or RefWorks and organizing it into bibliographical data; 5- building and exporting a bibliography for the final reports; 6- coding the raw materials into themes and nodes; 7-organizing the nodes into folders and build node

hierarchies for the project; 8- to gather descriptive information about people, places or organizations by making case nodes; and so forth (Nvivo9, 2011).

### **Trustworthiness, and Credibility in Qualitative Research**

The purpose of qualitative research is the deep understanding of a phenomenon, a problem, or a case through the interaction between the researcher and the researched. Due to the naturalistic nature of qualitative studies and the instrumental role that the researcher plays in this type of research, it is difficult to establish a set of standards for quality evaluation in this type of research. Therefore, historically qualitative research has been criticized for not being subject to any approved standards for validity check, internally and externally. Thus, there are numerous views and at the end it is up to the researcher on how to create credible findings and what standards to use to check for trustworthiness of the study.

Typically, researchers with post-positivist perspectives attempt to evaluate qualitative studies with the same barometers that are normally used in quantitative research (LeCompte & Goetz, 1982, cited in Creswell, 2013). However, this approach is against the naturalistic nature of qualitative studies and has been challenged by other social scientists (Ely, Anzul, Friedman, Garner, & Steinmetz, 1991, cited in Creswell). In addition, there are social scientists that are opposed to establishing any standards for qualitative research and they do not see any point in validating qualitative findings (Wolcott, 1990a, cited in Creswell). The social scientists also found alternative terms for evaluation of qualitative studies that are more congruent with the naturalistic nature of qualitative research such as: credibility, authenticity, transferability, dependability, and conformability as a substitute for internal validation, external validation, reliability, and objectivity” (Lincoln and Guba, 1985, p. 300, cited in Creswell, p. 246).

Nevertheless, with whatever angle we look at evaluation in the qualitative research, we have to realize that the purpose in every research is either to add the findings to the body of scholarly work in the topic; or to use the findings for some policy and treatment purposes; therefore, the findings should be trustworthy and credible to the eyes of the researcher, the audience or readers, and participants.

A credible research is the one in which: 1- The researcher uses rigorous methods of research in the fieldwork; 2- the researcher is well trained and has enough experience; 3- the researcher believes in the naturalistic view of the qualitative research (Patton, 2002). Thus, we realize that quality of research in qualitative studies depends fundamentally on the quality of the researcher; since, there is no statistical rule for judgment in qualitative studies, and it is all the researchers' judgment that makes a research of good quality or bad. However, there are some techniques that will help the researcher in providing a good quality work: 1- To be expressive on her/ his biases, self- awareness and self- cleansing and reporting the bias will release the burden of predispositions from research; 2- to look for different ways of organizing data, alternative themes and patterns, "rival explanations" (Patton, 2002, p.553); 3- To indicate her/his integrity in the research by reporting all alternative classification systems, themes, and explanations that the researcher has tested during data analysis.

A very typical technique for good quality research in qualitative study is triangulation; that is, using multiple sources of data, multiple methods, multiple theories, and multiple analysts (Patton, 2002). In this way, the researcher reduces the intrinsic bias that is the result of single methods. There are four types of triangulation: Using different data collection methods; 2- different sources within the same method; 3- using more than one analyst to review the findings; 4-using multiple theories to interpret the data. Moreover, triangulation can be done by:

Audience review as credibility triangulation; expert audit review; and review by inquiry participants. In any case, triangulation increases quality, trustworthiness and credibility of qualitative findings by affirming that the research's findings are the product of multiple methods, sources, perspectives, and analysts.

### **Ethical Consideration**

IRB has to approve emergent designs to protect human subjects. They want to know in advance fieldwork, who will be interviewed and the questions; however, if the topic is fairly innocuous and the general line of questioning is relatively unobtrusive, then, IRB may approve the framework of an emergent design with sample questions included but without formal interview instrument. Besides, the researcher must adhere to the highest ethical standards and avoid plagiarism and deception as well as ensuring accuracy and strive for credibility and accepts the responsibility for one's work. According to National Research Council, (2003- pp. 23-28, cited in Yin, 2009, p. 78) researchers must gain informed consent from all persons who may be part of case study; protecting those who participate from harm, protecting the privacy and confidentiality of those who participate; selecting participants equitably. To get formal approval from IRB Institutional Review Board before proceeding with research. The board will review how researcher is protecting human both in interviews and for archival records (Yin, 2009).

### **Evaluation of Qualitative Method**

The flexibility, the creativity, the wholeness, and variety of choices that researcher has in conducting qualitative research are the most interesting features of qualitative research.

Qualitative research is a field of inquiry that makes the world visible through an interpretive

naturalistic approach; that is, whereas qualitative research is a research of phenomena in a natural setting, it is an attempt to make sense of concepts through interpreting the phenomena. Moreover, conducting research from bottom-up, by getting information from those that are directly involved in it through inductive analysis; “grasp of the very nature of the thing,” (van Manen, 1990, p. 177 as cited in Creswell, 2013, p.76); to collect data from multiple sources and from persons who have experienced the phenomenon; searching for wisdom without presuppositions; the influence of researcher on research outcome, positive or negative (Husserl, n.d; Giorgi, 2009, as cited in Creswell, 2013); to develop a theory on the basis of data captured from participants through inductive, deductive analysis (constant comparative method), as well as systematic approach (Strauss and Corbin 1990, 1998), the constructivist approach (Charmaz 2005, 2006); researching about a group by living among the group, ethnography; and in-depth study of a bounded case (Stake, 1995; Yin, 2009, 2012) are all good quality features of qualitative research.

### **The Role of Researcher**

Researchers in qualitative study start with a big idea, a social problem that must be fully understood, analyzed, synthesized, and formed into the themes in the course of research by the researcher (Janesick, 2011). Therefore, the researcher is active in qualitative research from the beginning to the end of research and is an instrument of research; researchers are engaged in qualitative research from conceptualization to formulating and planning the methodology, designing interview questions, journaling the observations, interviewing, gathering the documents, analyzing, and interpreting the data gathered in the field. As such, researchers are participant and actively contribute to the findings of research; therefore, the researchers’ belief and ideas might bias the research. Also, the researcher must interact with participants, make

rapport with them, listen to them, and to be flexible and creative enough to change research questions and direction of research for a more appropriate outcome.

Therefore, qualitative researchers are not bound to a pre-structured rules and they must be ready to flex whenever is necessary. In a way, one can resemble the qualitative research with a dynamic system in which the main players are researchers and participants. The closeness and inter-relationship between these two important elements of qualitative research will provide some behavioral restriction for researchers; for example, ethical concerns in the fieldwork, in design of questions, and in interpretations. Qualitative research is a bricoleur, do it yourself, multi-method, multi-source, interpretative, evolving, creative, participants oriented, holistic, self-constructive mode of research. Mix and match of different approaches has achieved quite good results in the research; for example, the combination of case study and grounded theory is an interesting combination.

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