The design of a research study begins with the selection of a topic and a paradigm. A paradigm is essentially a worldview, a whole framework of beliefs, values and methods within which research takes place. It is this world view within which researchers work.

According to Cresswell (1994) "A qualitative study is defined as an inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting.

Alternatively a quantitative study, consistent with the quantitative paradigm, is an inquiry into a social or human problem, based on testing a theory composed of variables, measured with numbers, and analyzed with statistical procedures, in order to determine whether the predictive generalizations of the theory hold true."

The paradigm framework is made up of:

P Philosophy

O Ontology

E Epistemology

M Methodology

(Source: University of Sheffield)

A summary of the scientific paradigm (Quantitative) might be:

P Scientific materialism
O Laws of nature

E Measurable and observable ‘proof’

M Experiment, large scale data collection, quantitative analysis

A summary of the Humanistic/Post Modern paradigm might be summarized as:

P Homocentric reality as a social construct, contextual verities

O The nature of the psyche, of perception, creativity, intelligence

E self verified evidence, grounded theory, recorded testimony

M Phenomenology, ethnography, depth interviews

Key Distinctions between Qualitative and Quantitative Research

(1) Words and numbers

Qualitative research places emphasis on understanding through looking closely at people's words, actions and records. The traditional or quantitative approach to research looks past these words, actions and records to their mathematical significance. The traditional approach to research (quantifies) the results of these observations.

In contrast qualitative research examines the patterns of meaning which emerge from the data and these are often presented in the participants' own words. The task of the qualitative researcher is to find patterns within those words (and actions) and to present those patterns for others to inspect while at the same time staying as close to the construction of the world as the participants originally experienced it.

(2) Perspectival (Subjective) versus objective views
Discovery versus proof

The goal of qualitative research is to discover patterns which emerge after close observation, careful documentation, and thoughtful analysis of the research topic. What can be discovered by qualitative research are not sweeping generalizations but contextual findings. This process of discovery is basic to the philosophic underpinning of the qualitative approach.

Definitions of Qualitative Research

Denzin and Lincoln (1994) define qualitative research:

Qualitative research is multi-method in focus, involving an interpretive, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of or interpret phenomena in terms of the meanings people bring to them. Qualitative research involves the studied use and collection of a variety of empirical materials case study, personal experience, introspective, life story interview, observational, historical, interactional, and visual texts-that describe routine and problematic moments and meaning in individuals' lives.

Cresswell (1994) defines it as:

Qualitative research is an inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem. The researcher builds a complex, holistic picture, analyzes words, reports detailed views of informants, and conducts the study in a natural setting.

Characteristics of Qualitative Research

1. An exploratory and Descriptive focus
2. Emergent Design
3. Data Collection in the natural setting
4. Emphasis on ‘human-as-instrument’
5. Qualitative methods of data collection
6. Early and On-going inductive analysis

Cresswell (1994) divides qualitative research into five main Qualitative Research Types and identifies the key challenges of each mode of inquiry.

1. The Biography
2. Phenomenology
3. Grounded Theory
4. Ethnography
5. Case Study

Challenges of Each Type

Biography

- The researcher needs to collect extensive information from and about the subject of the biography.

- The investigator needs to have a clear understanding of historical, contextual material to position the subject within the larger trends in society or in the culture.

- It takes a keen eye to determine the particular stories, slant, or angle that "works" in writing a biography and to uncover the "figure under the carpet" (Edel, 1984) that explains the multilayered context of a life.

- The writer, using an interpretive approach, needs to be able to bring himself or herself into the narrative.

A phenomenological study may be challenging to use because

- The researcher requires a solid grounding in the philosophical precepts of
phenomenology.

- The participants in the study need to be carefully chosen to be individuals who have experienced the phenomenon.

- Bracketing personal experiences by the researcher may be difficult.

  - The researcher needs to decide how and in what way his or her personal experiences will be introduced into the study.

A grounded theory study challenges researchers for the following reasons:

- The investigator needs to set aside, as much as possible, theoretical ideas or notions so that the analytic, substantive theory can emerge.

- Despite the evolving, inductive nature of this form of qualitative inquiry, the researcher must recognize that this is a systematic approach to research with specific steps in data analysis.

- The researcher faces the difficulty of determining when categories are saturated or when the theory is sufficiently detailed.

- The researcher needs to recognize that the primary outcome of this study is a theory with specific components: a central phenomenon, causal conditions, strategies, conditions and context, and consequences. These are prescribed categories of information in the theory.

The ethnography is challenging to use for the following reasons:

- The researcher needs to have grounding in cultural anthropology and the meaning of a social-cultural system as well as the concepts typically explored by ethnographers.
• The time to collect data is extensive, involving prolonged time in the field.

• In many ethnographies, the narratives are written in a literary, almost storytelling approach, an approach that may limit the audience for the work and may be challenging for authors accustomed to traditional approaches to writing social and human science research.

• There is a possibility that the researcher will "go native" and be unable to complete the study or be compromised in the study. This is but one issue in the complex array of fieldwork issues facing ethnographers who venture into an unfamiliar cultural group or system.

The Case study poses the following challenges

• The researcher must identify his or her case. He or she must decide what bounded system to study, recognizing that several might be possible candidates for this selection and realizing that either the case itself or an issue, for which a case or cases are selected to illustrate, is worthy of study.

• The researcher must consider whether to study a single case or multiple cases. The study of more than one case dilutes the overall analysis; the more cases an individual studies, the greater the lack of depth in any single case. When a researchers chooses multiple cases, the issue becomes "How many?"- Typically, however, the researcher chooses no more than four cases. What motivates the researcher to consider a large number of cases is the idea of generalizability, a term that holds little meaning for most qualitative researchers.

Qualitative Methods of Data Collection

People’s words and actions represent the data of qualitative inquiry and this requires methods that allow the researcher to capture language and behavior. The key ways of capturing these are:
The Qualitative Paradigm

- Observation – both participant and direct
- In-depth interviews
- Group Interviews
- The collection of relevant documents
- Photographs and Video Tapes

The Interview

The interview is one of the major sources of data collection, and it is also one of the most difficult ones to get right. In qualitative research the interview is a form of discourse. According to Mischler (1986) its particular features reflect the distinctive structure and aims of interviewing, namely, that it is discourse shaped and organized by asking and answering questions. An interview is a joint product of what interviewees and interviewers talk about together and how they talk with each other. The record of an interview that we researchers make and then use in our work of analysis and interpretation is a representation of that talk.

Interview Probes

One of the key techniques in good interviewing is the use of probes.

Patton (1990) identifies three types of probes:

- detail-oriented probes
- elaboration probes,
- clarification probes.

1. Detail-oriented probes. In our natural conversations we ask each other questions to get more detail. These types of follow-up questions are designed to fill out the picture of whatever it is we are trying to understand. We easily ask these questions when we are genuinely curious.

- Who was with you?
The Qualitative Paradigm

- What was it like being there
- Where did you go then?
- When did this happen in your life?
- How are you going to try to deal with the situation?

2. Elaboration probes. Another type of probe is designed to encourage the interviewee to tell us more. We indicate our desire to know more by such things as gently nodding our head as the person talks, softly voicing 'un-huh' every so often, and sometimes by just remaining silent but attentive. We can also ask for the interviewee to simply continue talking.

  - Tell me more about that.
  - Can you give me an example of what you are talking about?
    - I think I understand what you mean.
    - Talk more about that, will you?
    - I'd like to hear you talk more about that.

3. Clarification probes. There are likely to be times in an interview when the interviewer is unsure of what the interviewee is talking about, what she or he means. In these situations the interviewer can gently ask for clarification, making sure to communicate that it is the interviewer's difficulty in understanding and not the fault of the interviewee.

  - I'm not sure I understand what you mean by 'hanging out'. Can you help me understand what that means?
  - I'm having trouble understanding the problem you've described. Can you talk a little
more about that?

- I want to make sure I understand what you mean. Would you describe it for me again?

- I'm sorry. I don't quite get. Tell me again, would you?

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**Characteristics of Good Qualitative Research**

- We use a tradition of inquiry. This means that the researcher identifies, studies, and employs one or more traditions of inquiry.

- We begin with a single focus. The project starts with a single idea/Problem that the researcher seeks to understand, not a causal relationship of variables or a comparison of groups. Although relationships might evolve or comparisons might be made, these emerge late in the study after we describe a single idea.

- The study includes detailed methods, a rigorous approach to data collection, data analysis, and report writing. This means, too, that the researcher verifies the accuracy of the account using one of the many procedures for verification.

- We write persuasively so that the reader experiences "being there."

- We analyze data using multiple levels of abstraction. Often, writers present their studies in stages (e.g., the multiple themes that can be combined into larger themes or perspectives) or layer their analyses from the particular to the general reflecting all the complexities that exist in real life. The best qualitative studies engage the reader.
REASONS FOR CONDUCTING

QUALITATIVE RESEARCH

Given these distinctions and definitions of a qualitative study, why does a person engage in such a rigorous design? To undertake qualitative research requires a strong commitment to study a problem and demands time and resources. Qualitative research shares good company with the most rigorous quantitative research, and it should not be viewed as an easy substitute for a "statistical" or quantitative study. Qualitative inquiry is for the researcher who is willing to do the following:

Commit to extensive time in the field. The investigator spends many hours in the field, collects extensive data, and labors over field issues of trying to gain access, rapport, and an "insider" perspective.

engage in the complex, time-consuming process of data analysis – the ambitious task of sorting through large amounts of data and reducing them to a few themes or categories. For a multidisciplinary team of qualitative researchers, this task can be shared; for most researchers, it is a lonely, isolated time of struggling with the data. The task is challenging, especially because the database consists of complex texts and images.

Write long passages, because the evidence must substantiate claims and the writer needs to show multiple perspectives. The incorporation of quotes to provide participants' perspectives also lengthens the study.

Participate in a form of social and human science research that does not have firm guidelines or specific procedures and is evolving and changing constantly. This complicates telling others how one plans to conduct a study and how others might judge it when the study is done.
If an individual is willing to engage in qualitative inquiry, then the person needs to determine whether a strong rationale exists for choosing a qualitative approach, and there are compelling reasons to undertake a qualitative study. In this respect Cresswell (1994) offers the following advice:

First select a qualitative study because of the nature of the research question. In a qualitative study, the research question often starts with a how or a what so that initial forays into the topic describe what is going on. This is in contrast to quantitative questions that ask why and look for a comparison of groups (e.g., Is Group 1 better at something than Group 2) or a relationship between variables, with the intent of establishing an association, relationship, or cause and effect (e.g., Did Variable explain what happened in Variable Y).

Second choose a qualitative study because the topic needs to be explored. By this, I mean that variables cannot be easily identified, theories are not available to explain behavior of participants or their population of study, and theories need to be developed.

Third use a qualitative study because of the need to present a detailed view of the topic. The side angle lens of the distant panoramic shot will not suffice to present answers to the problem, or the close-up view does not exist.

Fourth, choose a qualitative approach in order to study individuals in their natural setting. This involves going out to the setting or field of study, gaining access, and gathering material. If participants are removed from their setting, it leads to contrived findings that are out of context.

Fifth, select a qualitative approach because of interest in writing in a literary style; the writer brings himself or herself into the study, the personal pronoun "I" is used, or perhaps the writer engages a storytelling form of narration.

Sixth, employ a qualitative study because of sufficient time and resources to spend on extensive data collection in the field and detailed data analysis of "text" information.

Seventh, select a qualitative approach because audiences are receptive to qualitative
research. This audience might be a graduate adviser or committee, a discipline inclusive of multiple research methodologies, or publication outlets with editors receptive to qualitative approaches.

Eighth, and finally, employ a qualitative approach to emphasize the researcher's role as an *active learner* who can tell the story from the participants' view rather than as an "expert" who passes judgment on participants.