

## 14. Qualitative Field Research

Qualitative research is the method of choice when the research question requires an understanding of processes, events and relationships in the context of the social and cultural situation. Instead of generating numerical data supporting or refuting clear cut hypotheses, qualitative research aims to produce factual descriptions based on face-to-face knowledge of individuals and social groups in their natural settings. Qualitative research is useful for obtaining insight into situations and problems concerning which one may have little knowledge. This method is commonly used for providing in-depth description of procedures, beliefs and knowledge related to health issues, or for exploring the reasons for certain behaviours including the opinions of respondents about particular issues.

Quantitative and qualitative research are not in contraposition to each other. In fact different methods enable the researcher to gain access to different types of knowledge. These types of knowledge are not necessarily hierarchically arranged. Also they cannot be added together to provide a bigger or better picture of what is really happening. They may even come up with conflicting perspectives. Quantitative and qualitative research have to be thought of as complementary and are to be used to generate a richness of understanding and interpretation.

In all research there are three phases viz. i). preliminary; ii). principal, and iii). validation. The preliminary stage is one of concept formulation and definition of objectives, often leading on to piloting. Qualitative research can be invaluable in the early preliminary stage of concept formulation with a view to understanding social and cultural phenomena in natural settings in the light of experiences, meanings and views of all participants. It is also increasingly used to supplement quantification during the principal phase of research. Most research projects rarely include a validation stage of checking the conclusions against further data sets, or testing the feasibility of policy recommendation. By using a multi-method approach a research topic can be examined at different levels. In the validation stage also the contribution of qualitative research can be of great value. Certain phenomena or subjects are just not amenable to quantitative research. Here qualitative research can be extremely useful.

Qualitative data is in the form of texts and descriptions of behaviours and actions or practices. The verbal statements and actions of the subjects are being analyzed for meaningful interpretation. Data collection involves objective and accurate reporting of statements, activities and appearances of persons in their environment. The investigator seeks to understand the thoughts, feelings and experiences of individuals coping with their condition in a given setting. The role of the observer is crucial. It usually involves building up rapport with the study subjects through social and physical closeness.

## Definition

Qualitative field research may be defined as follows:

It is a disciplined inquiry examining the personal meanings of individuals' experiences and actions in the context of their social and cultural environment.

It is **qualitative** because of the nature of the data collected, which is usually detailed descriptions recorded by the investigator.

It is **field research** because the investigation is carried out in the usual environment where a phenomenon occurs, rather than in controlled laboratory settings.

It is **disciplined** because the inquiry is guided by explicit methodological principles for defining problems, collecting and analyzing the evidence, and formulating theories.

The term **personal meaning** refers to the way in which individuals subjectively perceive and explain their experiences, actions and social environments.

Taking together all these terms, qualitative field research aims to provide systematic evidence for obtaining insight into other persons' views of the world.

## Methodological Roots

Qualitative field research adopts a number of concepts from diverse disciplines as follows:

### **Phenomenology:**

One important concept adopted is that different people consciously experience the world in different ways. Therefore, in order to understand the meaning of a person's actions we must develop empathy and see things from their point of view.

### **Symbolic interactionism:**

A social situation has a meaning only in the way people define and interpret happenings and events. Different people, on the basis of their past experiences and their particular social positions may come to interpret a given situation in different ways, and act in conflicting ways.

### **Ethnography:**

This discipline studies the processes associated with the way in which people perceive, describe and explain the world. People select and apply specific rules and principles in the light of their "World View" in order to define and give meaning to situations in which they find themselves, and in order to justify their actions.

The above approaches have common themes and have each contributed to the development of qualitative field research.

## Data Collection and Interpretation

The fundamental aspect of qualitative field research is to position the investigator as close as possible to the subjects, so as to gain access to them and describe personal experiences. These are then interpreted in the context of the social setting.

There are no precisely defined hypotheses as in quantitative research. There are only general aims and theoretical notions about the phenomenon being studied. These are then open to modifications as data collection proceeds.

In the past qualitative field research often relied on *convenience sampling*, particularly when the group of interest was not easily accessible e.g. in ethnography. Proper sampling, when possible, offers the opportunity to avoid selection bias. It is often possible to include deliberately 'outliers' who get discounted in quantitative approaches.

*Systematic non-probabilistic sampling* is often used in order to identify specific groups of people who live in circumstances relevant to the phenomenon being studied. Informants are identified because they are knowledgeable, and can help explore a particular topic relevant to the research. The investigator is thus able to include a wide range of types of informants with access to important sources of knowledge.

*Theoretical sampling* is a form of non-probability sampling in which the objective of developing a theory or explanation guides the process of sampling and data collection. The researcher makes an initial selection of informants; collects and analyses the data and produces a preliminary explanation. After that and based on this explanation the researcher decides what further data to collect and from whom. Once these new data are analysed the theory is refined, and which in turn guides the next round of data collection.

Qualitative field research is about in-depth understanding of specific individuals, rather than studying the general characteristics of a large number of individuals across specific variables.

There are **four main methods** of qualitative research viz. Participant Observation; Depth Interviews; Group Interviews; and Projective Techniques. Of these participant observation is the archetypal qualitative method in that the subjects are studied in their natural environment. In all others artificial situations are created.

## Participant Observation

This term helps to draw a distinction between the objective observer who primarily through interviewing approaches a culture from outside, and the participant observer who researches a culture from within. The research is characterized by a prolonged period of intense social interaction between the researcher and the subjects in the milieu of the latter. During this period of interaction data are systematically, but unobtrusively, collected in the form of field notes. The researcher watches and records what people do and say whilst immersing himself in the host society learning to think, perceive, feel and sometimes act as a member of its culture, and at the same time as a trained researcher from another culture. There is involvement as well as detachment. Covert observation poses an ethical dilemma, whilst overt observation must contend with the Hawthorne effect – people change their behaviour if they know they are being observed.

**Subject matter.** The research is carried out in the natural setting, and there is no attempt by the investigator to control for extraneous influences. The phenomenon is observed and described as it occurs. There are no operational definitions of the dependent or independent variables.

**Position of the investigator.** The observer is more part of the phenomenon being studied, because in order to understand personal meanings and subjective experiences one has to be involved with the lives of the people being studied.

In quantitative research precise measuring instruments and strictly defined variables somehow limit the inquiry within the demarcations of the instruments and the definitions. Self-expression by the subjects becomes external to the inquiry. In qualitative research behaviours, body language and verbal as well as non-verbal cues are taken into account. Thus qualitative research is a form of open-ended inquiry which utilizes the in-depth case study approach, and requires the investigator's direct involvement in the lives of the informants with direct observation as a primary data-gathering device.

Why participant observation? Members of a group or organization are influenced by assumptions, which they take for granted. These assumptions reflect the unique culture of the group. Instead of relying on the perceptions of the subjects the researcher aims to get direct access to these assumptions by participation in the daily life of the subjects. It is a labour intensive method requiring substantial time commitment, but has the following advantages:

- As time passes the subjects are less likely to alter behaviour due to the presence of the observer.
- Information obtained from questionnaires may not reflect actual behaviour. Participant observation makes the difference between real and verbal behaviours apparent.
- Questions can be formulated using local slang.
- Sequences and pathways of events that contribute to the meaning of a phenomenon can be identified. Rather than piecing together a meaning from diverse clues, the context can be observed as it unfolds in reality.
- Many research questions cannot be investigated by any other methods.

It is clear that establishing rapport with members of the group being studied is essential. This requires being socially and culturally aware during fieldwork. The investigator must be unobtrusive, and make sure that dress or behaviour do not draw attention. When asked questions about one's purpose for being there, it is necessary to be open and self-revealing. At the same time one should play down one's special knowledge and skills. Just being a good listener is not enough. One should also be a reflective listener. By reflecting back on what is heard and observed the investigator is able to draw meaningful interpretations.

In deciding about what to observe and record the investigator needs to think of all the elements needed to tell a story under the headings who, what, when, where, why and how. For example,

1. Who is present? On what is their membership of the group based? How did they enter the group?
2. What is happening? What are people doing and saying? How are they behaving?
3. When does this activity occur? What is its relationship to other activities and events?
4. Where is it happening? What part do the physical surroundings contribute to what is happening?
5. Why is this happening? What precipitated the event? What contributes to things happening in this way?
6. How is the activity organised? How are the elements related?

Such a framework specifies the different elements of observation. These would be recognized as the way we normally process information when we encounter social interactions.

The next step is to consider the levels of observation. Three levels have been described viz. (i). Descriptive observation. One is guided by the general question "What is going on here?", and every attempt is made to observe as much as possible. (ii). Focused Observation. This is more selective and is determined by the choices the observer has made based on the research question, and on what has been learnt from being in the setting. (iii). Selective Observation is highly focused. It is intended for the researcher to compare the attributes of various activities.

**Informants** Researchers attempting to learn the insiders' view of a particular social and cultural scene normally seek the help of knowledgeable individuals from within the culture. Obviously, one wants someone who has been in the culture long enough. Other qualities to look for in one's informants are that they should be observant, reflective and articulate.

**Recording.** It is impossible to record everything. Inevitably, what is recorded is selective. This adds subjectivity to what is recorded. Experienced researchers maintain a field record or diary in which details of events, personal reactions to the events, and changes in the researcher's views over time are entered. This becomes the basis of developing tentative hypotheses which then get further refined as the research progresses.

**Analysis.** The researcher's task is to sift through the mass of field notes and decode the data to make sense of events, situations, and the interactions noticed. The analysis begins early on, and analysed regularly, interpreting it and testing the conclusions against hypotheses, and refining the latter. Well-kept records and their analysis are able to communicate the setting and happenings well enough for another researcher to learn from them sufficiently to become part of the group.

### **In-Depth Interview**

The in-depth interview takes the form of a conversation in which the researcher probes deeply to uncover new clues, to open up new dimensions of a problem, or to secure vivid, accurate and detailed accounts that are based on the personal experience of the subject.

People develop over their lives a personal framework of beliefs and values with which they selectively and subjectively build meaning and significance in events. It is this framework or schema and its real consequences for action that the researcher is interested in probing by this method. The subjects are encouraged to tell their own stories in their own words with prompting from the interviewer.

The researcher is not bound by a rigid questionnaire designed to ensure that the same questions are asked to all respondents in exactly the same way. At the most the interviewer carries an *aide memoir*. The purpose is to ensure sufficient flexibility for the researcher to follow up interesting ideas.

The advantages of in-depth interviews are that complex issues can be probed, answers can be clarified, as well as sensitive information may be obtained. The disadvantage is that the data are voluminous, time-consuming to gather, difficult to analyse. There are also many opportunities for interviewer bias to creep in. Also only a few subjects can be interviewed because the method is time consuming.

### **Group Interviews**

In this approach a small number of subjects are brought together to discuss topics on the research agenda. The interviewer takes on the role of a facilitator. The idea is not to conduct multiple interviews simultaneously, but facilitate a comprehensive exchange of views. The advantage is that ideas may be generated which would not have occurred to any one individual.

Most human problems have a social dimension. People are to be understood partly through their relationships and interactions with others, as well as through their own internal working as individuals.

Social interactions can be particularly important in what are known as 'action research' projects. These are situations where the research is designed to change as well as study a situation. The experience of discussing in groups helps to energize the participants to want to take things further.

Talking about common issues with others is stimulating. There is more to react to, more food for thought, more diversity of opinion expressed than in a typical individual interview. Group discussions often help people to analyze their own attitudes, ideas, beliefs and behaviour more penetratingly than they could do if talking alone with the interviewer. Group discussion is especially useful in the following situations:

- i). Where the social context is important.
- ii). In 'action research'.
- iii). When understanding and insight are required.
- iv). When the objective is to generate new ideas.

There are also inherent weaknesses in the group interview approach. There is the risk that social pressure will condition the response of the group in an artificial manner. Dominant or articulate characters can influence what is said. People can feel nervous about uttering views opposed to those of the rest of the group.

### **Composition of the group.**

The composition of the group will depend upon the research topic, but the sample is usually a purposive one. Large groups are difficult to run, and ten participants is the maximum size. Two groups is the absolute minimum for obtaining meaningful information. Characteristically, in most studies there are 4 to 12 groups, thereby ending up with between 20 to 100 subjects in all.

The facilitator does not work from a questionnaire, but from a general brief or outline to act as a "topics guide". Throughout the discussion, the facilitator would have to decide whether a given line of inquiry is proving useful and is worth pursuing. Group interviews are best described as steered conversation rather than interview in the pure sense. The respondents are left free to express themselves. The interviewer's function is mainly to nudge the conversation into the more fruitful channels.

A number of variations have been developed on the general theme of group interviews. These are:

- Extended group. The sessions are long and last 3 to 4 hours.
- Reconvened group. The groups are called back several times over a matter of weeks.
- Combined group and individual interviews.

### **Focus Groups**

The focus group is a special type of group in terms of its purpose, size and composition. The purpose is usually to assess needs, develop interventions, test new ideas and programmes or generate a range of ideas on a topic as background information for constructing more structured questionnaires. Focus

groups were originally used in communication studies to explore the effects of films and television programmes, and have become a popular method for assessing people's perceptions of various public initiatives including political ones.

A focus group is usually composed of 6 to 8 individuals who are not known to each other, but who have been selected because they share certain characteristics that are relevant to the research. At least two types of groups should be assembled for each characteristic. For example, in a study of infant feeding practices, one group of mothers whose children are growing well and another group made up of those whose children show faltering growth. Unlike group interviews, the topics to be discussed are decided beforehand, and the facilitator uses a list of open-ended questions arranged in a logical sequence. The objective is to obtain information on participants' beliefs and perceptions on a topic of interest. Instead of the researcher asking each person to respond to a question in turn, subjects are encouraged to talk to one another. They ask questions, exchange anecdotes and comments on each other's experiences and points of view. The group process helps the participants to explore and clarify their views that will not be possible in a one-to-one interview. Focus group discussion is particularly useful when the interviewer has a series of open ended questions, and wishes to encourage the participants to explore the issues in their own way generating their own answers. With good group dynamics the researcher often moves into unexpected directions exploring new answers.

**Analysis.** The discussions are recorded and transcriptions are used as material for analysis. Ideas, expressions, experiences and viewpoints are units of analysis, and logical relationships are looked for between them, in much the same way as one does in the case of quantitative research for associations between variables. The first task is that of deducing what people mean from what they say. The second task is to understand the implication of what is said.

A number of computer programmes have now become available such as Ethnograph and NUD.IST. These programmes make categorization easy. The investigator enters verbatim transcripts and marks the text by theme for the computer to sort and analyse. Subsets of categories can be built and modified to describe the full range of the data. Theory building is possible by linking categories and different segments of the text. NUD.IST is said to be particularly useful for this purpose.

### **Projective techniques**

In this method various imaginary situations are described, or pictures, objects etc. are shown to a group. The respondents project their own beliefs, feelings, attitudes in their response to such a stimulus thereby making accessible attitudes and feelings, which would have otherwise remained hidden.

### **Which method of qualitative research?**

Four most commonly employed methods of qualitative research have been described in this chapter. For descriptions of other types of methods the reader is referred to textbooks on qualitative research.

The methods are all flexible, and provide opportunities for interaction between the investigator and the subjects. Each of the four methods can have a rich output of data in textual form with the advantage of stemming from the experiences and perceptions of the subjects themselves rather than the researcher. This is the very special nature of qualitative research. Depending upon the subject of the research enquiry one or a combination of methods may be employed. The special contribution each method can make is summarized in table 14.1.

**Table 14.1 Methods of qualitative research**

	<b>Participant Observation</b>	<b>Group Interview</b>	<b>In-Depth Interview</b>	<b>Projective Techniques</b>
<i>Research Objectives</i> are:	+++	--	++	--
Descriptive				
Explanation of a phenomenon is required	+++	+++	++	+++
Action Research				
Use respondents' creativity	+++	+++	--	+++
<i>Research topic is:</i>	--	+	+++	+++
Sensitive	+++	+++	+++	+++
Complex				
Concerned with institution	+++	++	--	--
<i>Subjects are:</i>	+	++	++	+
Suspicious	--	+++	--	+++
Inhibited	+++	--	--	+++
Inarticulate	--	++	+++	++
High status	+++	+++	+++	+++
Low status				
<i>Research method</i> needs to be	+++	+++	++	--
Interactive	+	+++	+++	+
Verbal communication				
Response depends on social norms	+++	+++	+	+

+++ = High    ++ = Moderate    + = Low

## Application of Qualitative Methods in Medical Research

Quantitative approaches are applied for discovering cause and progress of disease and disability; for checking assessment procedures and diagnostic tests; and for evaluating the effectiveness of interventions.

Qualitative field research provides evidence and theories which enable us to better understand the subjects as human beings. How their lives are affected or distorted by specific situations is looked at through their eyes. Qualitative research helps to show the diversity within a given population unlike the quantitative approach, which aims largely at statistical generalisability. Its role in medical work is summarized in table 14.2

**Table 14.2**  
A role for qualitative research in medical research

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<b>Phase of Research</b>	<b>Qualitative Research</b>	
	As the main approach	To complement quantitative research
Preliminary	Concept formulation Generation of hypotheses	Concept clarification Design of questionnaire
Principal	<i>Topic is:</i> Sensitive Unmeasurable Concerned with interaction Concerned with process  <i>Subjects are:</i> Inarticulate Few in number  <i>Research Objectives are:</i> Action oriented	Interpretation Case Studies Illustration Process evaluation
Validation	Triangulation between techniques Policy recommendation	Between methods

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## Sampling

The major concern in qualitative research is with richness of information, and so sample size is not a determinant of research significance. It is true that problems can arise with observer bias, inter-observer variation and trustworthiness of informants. In the case of qualitative data the equivalent terms for reliability and validity are credibility, dependability and confirmability.

A variety of sampling techniques are employed depending upon the research question and the setting. These are:

**Maximum variation sampling.** The researcher is seeking to obtain the broadest range of information and perspectives on the study subjects. The purpose is to document variations and identify important common patterns.

**Critical-case Sampling.** The researcher is looking for the particularly good story that throws light on the study question. Such data can permit generalization, and application of the information to other cases. The "typical case" highlights what is normal or average. The "intense case" is full of data manifesting the phenomenon. On the other hand the "extreme" or "deviant" case provides unusual forms of presentations.

**Theory based Sampling.** The researcher is looking for examples of a theoretical principle, and is examining and elaborating it in various ways. The sample is intended to provide examples that fit into a theory.

**Selecting, confirming and disconfirming cases.** The researcher is looking for data that will support or challenge the current understanding of the subject. In many instances one is elaborating on an initial analysis, seeking exceptions, and looking for variations. Purposefully looking for negative cases to refute a hypothesis is as important as looking for supportive data.

## Data base

In quantitative research the database consists of sets of measurements or precise descriptions. These are then summarized and analyzed using statistical methods. In qualitative research the data is descriptive, comprising records of what people said, their actions, non-verbal behaviour, and interactions with other people. Instead of questionnaires, the investigator maintains detailed field notes.

At the time of reporting it is essential that truthful reports of events be maintained. This is particularly important, because given the closeness with one's subjects and existing empathy there is the temptation to put one's subjects in good light.

In quantitative research the data will enable the reader to see how variables relate to each other. In qualitative field research the data is essentially a narrative describing what happened to people, what they said or did in specific situations, and what meanings may be derived from it.

Bearing in mind these differences between quantitative and qualitative research, one can look into methods of recording data in the field. These are in the form of jottings, diaries, memos etc., which are then compiled into field notes, and reflective notes.

Field notes provide a literal account of the happenings - the processes and their context. The points to consider are what to record, how to record, and when to record.

*What to record:*

The framework to follow is descriptions of the settings; the actors (people involved); the activity; the objects (things that are present); actions (single actions that people do); events (related activities that people carry out); time (sequencing that takes place over time); goals (things people are trying to accomplish); feelings (felt and expressed).

*How to record:*

During a "session" a variety of observations are made and information gathered. It is unlikely that extensive notes writing would be feasible in the field. The researcher jots down key words and phrases, which are later expanded into Field Notes. These form the core of the data. It is useful to have wide margins for writing comments about meanings, theoretical hunches and feelings. The comments comprise methodological and analytical aspect of the fieldwork. Throughout the period of data collection insights, themes, and ideas emerge. They form the reflective dimension of the fieldwork.

*When to record:*

The simple answer is "As soon as possible after the observation". It is risky to rely on memory.

## **Theories**

Theories represent current state of knowledge, and logically explain or integrate a broad range of research findings. In quantitative research theories integrate patterns concerning the interrelationships among variables. In the case of qualitative field research theories are interpretations of personal meanings in specific social settings.

Some commentators suggest that data collection and theory formulation should be integrated in qualitative research, rather than being different stages of the research process. Often theory formulation is done by identifying common themes or categories of meanings emerging from the data.

## Analysis of Qualitative Research Data

In qualitative research the investigator usually ends up with a substantial amount of written text. Analysis of the information obtained follows the same principles as in the case of quantitative data analysis viz.

1. **Describe the sample population** Description of the sample involves describing the key informants by age, sex, occupation, education, marital status, and so on (as in quantitative studies). If the number is small then one gives a brief description about who were the key informants, what made them qualify as such, who took part in focus group discussions; how representative were they of the group they represented; under what circumstances were the observations carried out; who was observed; who was not; what were the reactions of those observed.
  
2. **Order or code the data (data processing).** Immediately after each session the raw field notes are to be transformed into a well-organized set of notes. This version of notes should reflect closely what was discussed, or observed, and also include the observer's comments. Field notes often contain non-essential details. Also data in the notes are not in the order suitable for analysis. To simplify analysis, one has to order as well as reduce the data. Ordering is best done in relation to the objectives of the research or the discussion topic. The text is organized under appropriate headings and labels in accordance with the research topic.
  
3. **Display summaries** of data in such a way that interpretation becomes easy. The purpose of ordering and labeling the data is to facilitate summarizing. The first step is to list the data that belong together. For example, one lists all the data that have been given the same heading. The next step is to summarize graphically in the form of a matrix or a diagram or flowchart. A matrix looks like a table but contains words instead of numbers. Matrices are the most common forms employed for graphic display of qualitative data. They are used to order information by:

time sequence of activities being investigated;  
 type of informants; location of data collection;  
 type of activity; reasons for certain behaviour; and so on.

Diagrams are drawings with boxes or circles containing variables and arrows indicating the relationships between them. Like matrices diagrams are of help in keeping an overview of the data collected and in guiding data analysis.

Flow charts are special types of diagrams that express the logical sequence of actions or decisions.

Displaying summarized data in charts, figures and matrices help to visualize possible relationships between certain variables. Matrices are particularly useful for discovering relationships, and one usually begins with them.

**4. Draw conclusions.** Collection, processing, analysis and reporting of qualitative data happen together unlike in the case of quantitative studies. The essential characteristic of qualitative research approach is that it purposefully looks for associations between variables during the fieldwork, and hence the simultaneous collection and analysis of data.

Variables may appear to be related but the association cannot be easily explained. Other times it seems that variables should logically go together, but one does not find a relationship. Identifying key variables and the associations between them is the essential aspect of drawing conclusions.

**5. Develop strategies for testing or confirming the findings.** The following methods are commonly used for confirming the findings. They apply to all types of research, but are particularly relevant to qualitative research.

1. Check for representativeness of data.

It is necessary to make sure that all categories of informants have been interviewed in order to get a complete picture. One must avoid the pitfall of generalizing from unrepresentative data or events.

2. Check for bias.

Bias may be related to the observer, the informant, or the effect of the researcher on the local situation.

3. Crosscheck data with evidence from other independent sources.

Evidence from other sources may be derived by using different independent informants, different research techniques used to investigate the same topic, or the findings of other similar research studies. The evidence should confirm, or at least not contradict, each other. Carefully cross-checking the data, looking for independent evidence or counter evidence is one of the most important ways in which a researcher can enhance the validity of his data.

4. Compare and contrast data.

This is a useful technique if one is attempting to identify the more important variables as well as confirm associations between variables.

5. Use extreme informants to the maximum.

For example, in a study about compliance with treatment one may look at heavy defaulters and regular attenders, leaving out irregular attenders.

6. Do additional research to test the findings of the study.

The purpose of additional research is to replicate the more important findings, to rule out or identify intervening variables, rule out rival explanations, or to look actively for negative evidence.

7. Get feedback from the informants. The informants' reactions to findings can help refine explanations, but it should be borne in mind that whereas researchers seek to provide an overview, respondents have individual concerns. Respondent validation can be valuable in action research projects where researchers work with participants on an ongoing basis to bring about change. In situations where the research is a matter of one-off data collection as in most health service research, respondent validation can slow the process down.

## VALIDITY OF QUALITATIVE FIELD RESEARCH

One major problem with the unstructured data collection technique common to all qualitative research is that observer bias may distort the data. In addition, the sampling process involved in qualitative field research is complex. Most social phenomena are affected by their participants. In studies where there are small numbers of participant-observers the phenomena can get distorted by their own biases.

It may also be understood that the findings are culture specific - what is true in one culture is not necessarily true in another. Therefore, like all studies qualitative studies must also face the challenge of external and internal validity. The following strategies are recommended to ensure validity and reliability of field studies:

- Prolong the period of study to minimize distortion caused by the presence of the observer.
- Ask the subjects if the observations concerning them are correct. This is the simplest method of verification viz. to try to establish whether the researcher's interpretation makes any sense to the subjects. The extent to which consensus develops between the researcher and the subjects is a useful indicator of truth.
- Check and crosscheck descriptions against theoretical interpretations.
- A method often employed is called triangulation. The term stems from navigational science, and refers to the technique of determining location by taking bearings from two directions. In qualitative research triangulation refers to combining several different methods of inquiry and data collection in a single study. The rationale of triangulation is that each method reveals different aspects of empirical reality, and serves as a check for internal validity. Triangulation helps to avoid errors linked to a particular method by using multiple methods in which different types of data provide cross-validity. The most common form of triangulation employed is data triangulation in which different data sources are used (for example multiple key informants, or multiple groups), and methodological triangulation (multiple methods are used to study a phenomenon). Other forms of triangulation include investigator triangulation (different investigators are used to study the same problem), and theory triangulation (different theoretical constructs are used to interpret the same data).

Triangulation may sound easy to achieve, for example, combining data collected in fieldwork interviews with focus groups. In practice it is difficult to combine data collected using different methods. The methods used in qualitative research provide parallel data sets each affording only a partial view of the whole picture.

### **Appendix 14.1 Basic types of questions for In-depth interviewing**

- Questions that elicit descriptions of experience, behaviour, actions, and activities. (e.g. ‘What are the most memorable experiences you have had as.....?’)
- Opinion or value questions to inform about people’s goals, intentions, desires and values (e.g. ‘Why are you a ...?’)
- Questions about feelings in order to obtain an understanding of emotional responses (e.g. ‘How did you feel when...?’)
- Questions about knowledge and factual information (‘How many of you are in this community?’)
- Questions which determine what sensory stimuli – sight, sound, touch, taste or smell – respondents are sensitive to (e.g. ‘Why do you like flowers for the ceremony?’)
- Background questions that aim to understand the respondents’ previous experiences (e.g. ‘Will you briefly explain how you were trained?’)