

3. Data Collection



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Agenda

- Qualitative Vs Quantitative (Review)
- Methods of Data collection

Qualitative vs. Quantitative Research Overview

Research methods can be classified in various ways, however one of the most common distinctions is between qualitative and quantitative research methods.

- Quantitative research methods were originally developed in the natural sciences to study natural phenomena. Examples of quantitative methods now well accepted in the social sciences include survey methods, laboratory experiments and numerical methods such as mathematical modelling.
- Qualitative research methods were developed in the social sciences to enable researchers to study [social](#) and [cultural](#) phenomena. Examples of qualitative methods/instruments include observation, case studies, interviews and questionnaires, documents and texts, and the researcher's impressions and reactions.

Quantitative Research (Cont.)

- Quantitative roughly means in terms of ‘quantities’ implying the extent to which something either does or does not occur in terms of amount, number, frequency etc.
- The term ‘quantity’ also refers to measuring and counting.
- Typical questions for quantitative research are: How often does this occur? How many people use this service? How many complaints did we receive in the last quarter? Or: Which of these is the most important service to our customers? No wonder this approach contains a preference for working with numerical data, figures and statistics.

Quantitative Research (Cont.)

- The quantitative researcher, as described earlier, tries to be an objective (or: neutral) observer. He is not personally involved in the phenomena that are being examined and will strive to be as objective and independent as possible in the research at all times.
- The outcome of quantitative research is the testing of a theory or theoretical insights in a predetermined reality.
- Questionnaires are pre-coded, observations are structured and interviews are standardized.

Qualitative Research

- Qualitative Research
 - Observing Through the Eyes of Someone Else (As opposed to through the researcher's eyes).
 - Using an Open Research Question
 - The researcher is not an expert but an 'explorer' - he hopes to find

The essence of qualitative research is to identify the characteristics and structure of phenomena and events examined in their natural context.

Qualitative Research (Cont.)

- The researcher will try to ‘look through the eyes of someone else’ or at least make a systematic attempt to understand and respect the actors perspective
 - The researcher will try to develop insight into and understanding of actions and meanings within a certain social context while paying attention to time and process.
- The most important source of data include: conversations, interview, observations etc.
 - The qualitative researcher is completely involved in his research; this can easily result in uncontrollable subjectivity.
 - The systematic analysis (transcription, classification, coding and interpretation) is generally given little attention in this type of research.
 - Given the open character, it is often difficult to indicate the starting and finishing point; the researcher does not know when the research is finished.

Summary of Differences

Qualitative	Quantitative
observation interview focus groups texts/documents audio/video small number (few subjects)	social surveys - questionnaires - cards - logs statistics large number (large samples)
words analysis + data collect same time in-depth focused (fewer) social sciences how, what, how come research questions social, cultural (naturally occurring)	numbers quantity = quality broad (many) natural sciences why questions and hypothesis testing laboratories, controlled experiments

- Remember that interviews are not naturally occurring, they are 'constructed' by researchers - other artificial research environments: focus groups, experiments, survey, questionnaires.

What is best?

- No method of research, quantitative/qualitative is better than any other.
- In choosing a method, everything depends upon what we are trying to find out.
 - In what way are these methods relevant to our research problem and to our model of how the world is put together?
- Thus, it depends on your research question/objectives.
 - Different questions require different methods to answer them.

Data Collection Methods

Methods for data collection: Interviews, observations (passive, participant), audio recording, video recording, text analysis, content analysis from media.

- Observation (passive, participant): objects, people, events, place (naturally occurring)
- Text and document analysis (e.g. screen dumps, newspapers, letters, agreements, brochures, etc.)
- Interviews: open-ended, structured, semi-structured (not naturally occurring settings)
- Video / audio -> Tapes are a public record; they can be replayed and transcripts improved; and they preserve sequences of talk.
- Focus groups -> group discussions usually based upon stimuli (topics, visual aids) provided by the researcher.
- A questionnaire survey, e.g. of relevant people in an organisation, or of consumers, customers etc. This can be done using printed or electronic questionnaires.

Data Collection Methods



Interviews

Interviews can be grouped into three main types:

1. Structured
2. Semi-structured
3. Unstructured

Structured Interviews

Structured interviews involve the use of questionnaires based on a predetermined and identical set of questions. The questions are usually read out by a researcher in a neutral tone of voice to avoid influencing or prompting a particular response from a participant.

Semi-Structured Interviews

The interviewer will have a list of themes and areas to be covered and there may be some standardized questions, but the interviewer may omit or add to some of these questions or areas, depending on the situation and the flow of the conversation.

Unstructured Interviews

These are informal discussions where the interviewer wants to explore in depth a particular topic with another person in a spontaneous way. However, even in unstructured interviews it is likely that the researcher would have a pre-decided range of topics to cover in the discussion.

Focus Groups

- Focus groups are used to gather data, usually in the forms of opinions, from a selected group of people on a particular and pre-determined topic, e.g. consumer topic; political topic etc.
- The purpose of the discussion is introduced and discussion ground-rules agreed. The researcher encourages free discussion, but is ready to intervene if necessary to resolve group problems.
- Focus groups can be a useful way of finding out what the main issues and concerns of any group are. This can help in questionnaire design or to develop a future interview strategy.
- They can be a useful way too, of bringing to the surface issues that might not otherwise have been discovered: the dynamics of a group can often make people bolder in advancing their opinions.

Participant Observation

- As discussed earlier, participant observation is when a researcher attempts to observe in some way in the group being researched and to share in the experiences being recorded and analysed.
- It can be used in association with other research approaches or as the primary way of gathering data. It can be a good way of getting below the surface of any situation and to help reveal or unravel complex causal social processes.

Questionnaires

- Questionnaires facilitate the collection of data by asking all, or a sample of people, to respond to the same questions. They can be in both printed and electronic forms.

Questionnaires (Cont.)

- You need to absolutely clear before you design a questionnaire what it is you want to learn and what data you need to obtain to enlighten you in this search.
- You also need to think ahead about how you are going to collate the information you gather. There is no point in designing a questionnaire that produces a range of information you find very difficult to collate in any meaningful quantitative or qualitative way.

Questionnaires (Cont.)

- The order and flow of questions should be logical to the respondent.
- There can be a **low rate of return** with questionnaires, so they need to be introduced carefully and courteously to potential respondents. This introduction can include the use of a covering letter; offering a prize or other inducement can also improve the rate of return of questionnaires.
- All questionnaires should be **piloted**, if possible, with a small group before the main research to assess their value, validity and reliability.

Some General Rules for Designing Questionnaires

1. Explain the purpose of the questionnaire to all participants
2. Keep your questions as simple as possible
3. Do not use jargon or specialist language (unless the recipients really prefer and understand it)
4. Phrase each question so that only one meaning is possible
5. Avoid vague, descriptive words, such as 'large' and 'small'
6. Avoid asking negative questions as these are easy to misinterpret
7. Only ask one question at a time
8. Include relevant questions only

Some General Rules for Designing Questionnaires

- 9. Include, if possible, questions which serve as cross-checks on the answers to other questions
- 10. Avoid questions which require participants to perform calculations
- 11. Avoid leading or value-laden questions which imply what the required answer might be
- 12. Avoid offensive questions or insensitive questions which could cause embarrassment
- 13. Avoid asking 'difficult' questions, e.g. where the respondent may struggle to answer (people hate to look stupid by not knowing the 'answer').
- 14. Keep your questionnaire as short as possible, but include all the questions you need to cover your purposes

Asking the Right Questions in the Right way

Exercise

- Please comment on the wording of the following open questions taken from a range of questionnaires.

Question	Comment
1. How satisfactory was your stay at the XYZ Hotel?	
2. What is your place of residence?	
3. What is your religion?	
4. How old are you?	
5. Does your employer make adequate provision for maternity/paternity leave?	
6. How much time did you spend reading the newspaper yesterday?	

Exercises

- You are conducting research on the topic “Hakikisha: A Mobile Application for Detecting Counterfeited Products”
 1. Prepare/Plan for a Focus group
 2. Assuming that you intend to use a questionnaire for data collection, formulate a questionnaire for this.

End



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