

4.1 Design and Process in Qualitative Research

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1 ON THE ROLE OF DESIGN IN QUALITATIVE RESEARCH

In quantitative research there is a comprehensive literature on various forms of research design, such as cross-sectional and longitudinal designs, experimental versus non-experimental research, on the use of control groups or so-called double-blind trials in pharmaceutical studies. 'Data collection designs are a means to the end of collecting meaningful data' (Diekmann 1995: 274). The decision to use one of the types of design mentioned is often intended to control, minimize or exclude the influence of the research or the researcher on the data-collecting situation. In qualitative research little importance is attached to this aspect, which leads Miles and Huberman (1994: 16) to point out that 'Contrary to what you might have heard, qualitative research designs do exist.'

In more general terms, in both areas the question of the planning of an investigation is addressed with the keyword of research design: how should the data collection and analysis be set up, and how is the selection of empirical 'material' (situations, cases, persons) to be made, so that the research questions can be answered and this can be achieved within the time available, using the available means? This is in agreement with the definition given by Ragin (1994: 191):

Research design is a plan for collecting and analyzing evidence that will make it possible for the investigator to answer whatever questions he or she has posed. The design of an investigation touches almost all aspects of the research, from the minute details of data collection to the selection of the techniques of data analysis.

The (not very comprehensive) literature on research design in qualitative research (cf. LeCompte and Preissle 1993; Marshall and Rossman 1995; Miles and Huberman 1994; and see Flick 2002: chs 5-7) deals with the subject in two ways: either particular basic models of qualitative research are contrasted, and the researcher may choose between for his or her concrete study (e.g. Creswell 1998), or else the components from which a concrete research design is put together are listed and discussed (e.g. Maxwell 1996).

The components that play a role in the construction of a research design and must therefore be considered are:

- the goals of the study
- the theoretical framework
- its concrete questions
- the selection of empirical material
- the methodological procedures
- the degree of standardization and control
- the generalization goals and

- the temporal, personal and material resources that are available (cf. section 3 below).

2 BASIC DESIGNS IN QUALITATIVE RESEARCH

The following basic designs in qualitative research may be distinguished (cf. also Creswell 1998):

- case studies
- comparative studies
- retrospective studies
- snapshots: analyses of state and process at the time of the research, and
- longitudinal studies.

Case studies

The aim of case studies is the precise description or reconstruction of a case (for more detail cf. Ragin and Becker 1992). Case is rather broadly understood here - in addition to persons, social communities (e.g. families), organizations and institutions (e.g. a nursing home) could become the subject of a case analysis. In this the decisive problem is the identification of a case that would be significant for the research question, and the clarification of what else belongs to the case and what methodological approaches its reconstruction requires (on this cf. Hildenbrand 1999). If a case analysis is concerned with school problems of a child it must, for instance, be made clear whether it is enough to observe the child in the school environment, whether the teachers and/or fellow pupils should be questioned and to what extent the family and their everyday life should be observed as part of the analysis. Finally, it needs to be made clear what this case represents (cf. Flick 2002: 89ff.).

Comparative studies

In comparative studies, on the other hand, the case is not observed in its totality and complexity, but rather a multiplicity of cases with regard to particular excerpts: the specific content of the expert knowledge of a number of people or biographies in respect of a concrete experience of sickness and the subsequent course of life are compared with each other. Here there arise above

all questions to do with the selection of cases in the groups to be compared. A further problem is what degree of standardization or constancy is felt to be necessary in the remaining conditions that are not the subject of the comparison: to be able to show cultural differences in the views of health among Portuguese and German women, interview partners from both cultures were selected who live in as many respects as possible (big city life, comparable professions, income and level of education) under at least very similar conditions, in order to be able to relate differences to the comparative dimension of 'culture' (cf. Flick et al. 1998; Flick 2000c).

The dimension of single case-comparative study represents one axis according to which the basic design of qualitative research may be classified. An interim stage consists of the interrelation of a number of case analyses which can initially be carried out as such and then compared or contrasted with each other. A second axis for the categorization of qualitative design follows the dimension of time, from retrospective analyses to snapshots and then to longitudinal studies.

Retrospective studies

The principle of case reconstruction is characteristic of a great number of biographical investigations which operate with a series of case analyses in a comparative, typologizing or contrastive manner (see below). Biographical research (see 3.6, 3.7, 5.11) is an example of a retrospective research design in which, retrospectively from the point in time when the research is carried out, certain events and processes are analysed in respect of their meaning for individual or collective life-histories. Design questions in relation to retrospective research involve the selection of informants who will be meaningful for the process to be investigated ('biography bearers' - Schütze 1983). They also involve defining appropriate groups for comparison, justifying the boundaries of the time to be investigated, checking the research question, deciding which (historical) sources and documents (see 5.15) should be used in addition to interviews with the biography-bearers (on this form of triangulation cf. Marotzki 1995b, and 4.6), and how the influences of modern views on the perception and evaluation of earlier experiences should be considered (cf. Bruner 1987).

Snapshots: the analysis of state and process at the time of the investigation

In contrast to this, a large part of qualitative research focuses on snapshots: different manifestations of the expertise that exists in a particular field at the time of the research are collected in interviews (see 5.2, 5.3) and compared to one another. Even if certain examples from earlier periods of time affect the interviews, the research does not aim primarily at the retrospective reconstruction of a process. It is concerned rather with giving a description of circumstances at the time of the research.

A range of process-oriented procedures are also strongly related to the present and are therefore not interested in the reconstruction of past events from the point of view of (any of) the participants (cf. Bergmann 1985; see 5.5), but in the course of currents from a parallel temporal perspective. In ethnographic studies researchers participate in the development of some event over an extended period in order to record and analyse this in parallel to its actual occurrence. In conversation analyses (see 5.17) a conversation is recorded and then analysed in terms of its sequencing, while in objective hermeneutics (see 5.16) a protocol is interpreted in a strictly sequential manner 'from beginning to end'.

In these approaches, from the design point of view, there arises the question of how to limit the empirical material. How can the selection guarantee that the phenomenon that is relevant to the research question is actually contained in empirically documented extracts from conversations and processes? Where should the beginning and end of a (conversational or observational) sequence be located? According to what criteria should material for comparison be selected and contrasted: what conversations or conversational extracts, and what observational protocols ought, in concrete terms, to be compared?

Longitudinal studies

The final variant of a basic design in qualitative research consists of longitudinal studies, which also analyse an interesting process or state at later times of data collection. This strategy has rarely been used, at least explicitly, in qualitative research. Exceptions are Gerhardt's (1986) investigation of patients' careers, where an interview partner was questioned again a year

later, and the study by Ulich et al. (1985) on the processing of unemployment among teachers, where the subjects were interviewed seven times in the course of a year. In most qualitative methods there is little guidance on how they could be applied in longitudinal studies with several periods of data collection (see 6.5). Implicitly, a longitudinal perspective within a temporally limited framework is realized in ethnography (see 5.5) by virtue of the researcher's extended participation in the field of study, and also – with a retrospective focus – in biographical research (see 3.6, 3.7, 5.11), which considers an extended section of a life-history. The great strength of a longitudinal study – of being able to document changes of view or action through repeated collection-cycles, where the initial state of a process of change can be recorded without any influence from its final state – cannot therefore be fully realized.

Figure 4.1.1 arranges the basic designs in qualitative research that we have discussed according to two dimensions.

3 PROCESSUAL DECISIONS IN THE REALIZATION OF DESIGNS

The process of qualitative research may be described as a sequence of decisions (Flick 1995, 2002). Here researchers, in realizing their projects, can make a choice between a number of alternatives at various points in the process – from questions to data collection and analysis and ultimately to presentation of results. In these decisions researchers realize the design of their study in a dual sense – a design planned in advance is translated into concrete procedures or else, while in process, the design is constituted and modified by virtue of the decisions in favour of particular alternatives.

Goals of the study

A qualitative study may be used to pursue a number of different goals. The model is often the approach of grounded theory development in accordance with the model of Glaser and Strauss (1967; see 2.1, 5.13, 6.6). The form of openness essential for this goal has long been a feature of the debate about qualitative research in general (e.g. Hoffmann-Riem 1980) and lies behind a number of methodological approaches (e.g. theoretical sampling as a principle of case

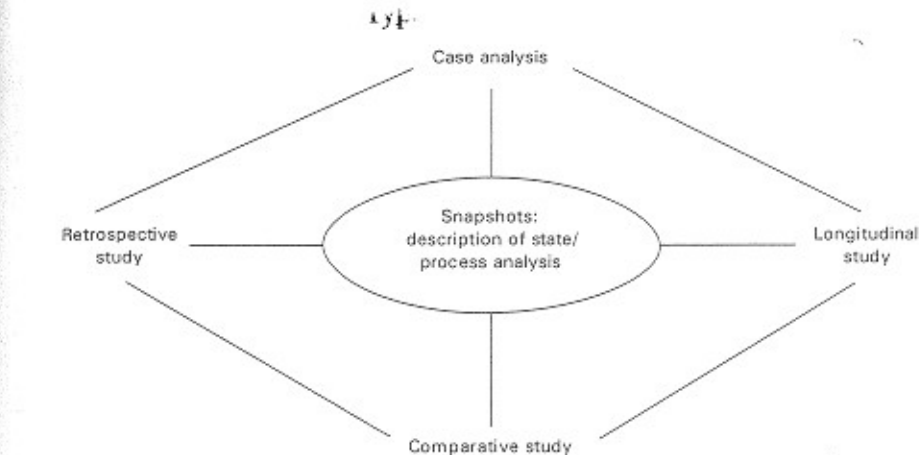


Figure 4.1.1 Basic designs in qualitative research

selection, see 4.4). In this context, it must be borne in mind that the requirement of theory development is an excessive burden for many types of qualitative studies: to force this goal on graduation theses is as unrealistic as it is incompatible with the intentions of many of those who commission qualitative research projects (see 6.5). Here what is required are detailed descriptions or evaluations of current practice. In the case of a stage that seeks to provide an exact description of sequences of events in institutional or everyday practice, some of the methodological tools of Glaser and Strauss (for example, theoretical sampling) may be applicable, but do not necessarily have to be. The question of the extent to which a hypothesis-driven or hypothesis-testing study can be realized by qualitative methods (see 4.2) has not yet been adequately answered, but will be of practical relevance in a number of different contexts: for example, in objective hermeneutics hypotheses will be set up in the course of the interpretation, and these will be tested and falsified during the analysis of further material (see 4.7, 5.16). These examples will demonstrate that there are different types of objectives for qualitative studies: description, testing of hypotheses, theory development. At the level of objectives, Maxwell (1996: 16) makes a further distinction between studies that pursue primarily personal goals (for example, a graduation thesis or dissertation), those that pursue practical goals (discovering if and how a particular

programme or product functions) and those that pursue research goals (and are more concerned with developing general knowledge of a particular subject).

Formulation of the research questions

The research question of a qualitative investigation is one of the decisive factors in its success or failure. The way in which it is formulated exerts a strong influence on the design of the study. On the one hand, questions must be formulated as clearly and unambiguously as possible, and this must happen as early as possible in the life of the project. But on the other hand, in the course of the project questions become more and more concrete, more focused, and they are also narrowed and revised (cf. Flick 2002: 64). Maxwell (1996: 49) is representative of the viewpoint that questions should be less the starting point and rather the result of the formulation of a research design. Consequently questions may be viewed or classified according to the extent to which they are suited to the confirmation of existing assumptions (for instance in the sense of hypotheses) or whether they aim at new discoveries or permit this. Strauss (1987: 22) characterizes the latter as 'generative questions'. By this he means: 'Questions that stimulate the line of investigation in profitable directions; they lead to

hypotheses, useful comparisons, the collection of certain classes of data, even to general lines of attack on potentially important problems.'

Research questions may on the one hand be kept too broad, which means that they would then provide almost no guidance in the planning and implementation of a study. But they may also be kept too narrow and thereby miss the target of investigation or block rather than promote new discoveries. Questions should be formulated in such a way that (in the context of the planned study and using the available resources) they are capable of being answered. There have been a number of attempts to establish a typology of research questions (cf. for example, Flick 2002; Lofland and Lofland 1984). Maxwell (1996), with an eye on research design, distinguishes between generalizing and particularizing questions, together with questions that focus on distinctions, and those that focus on the description of processes.

Generalization goals and representational goals

In setting up a research design it is advisable to take into account what generalization goals are bound up with the study: is the target a detailed analysis of as many facets as possible, or is it a comparison or a typology of different cases, situations and individuals, and so on? In comparative studies there is the question of the principal dimensions according to which particular phenomena are to be compared. If the study is restricted to one or very few comparative dimensions, based on some theory or on the research questions, this will avoid the possible compulsion to consider all possible dimensions and include cases from a large number of groups and contexts. Here it is important to check critically the extent to which classic demographic dimensions need to be considered in every study: do the phenomena being studied and the research question really require a comparison according to gender, age, town or country, East or West, and so on? If all these dimensions have to be considered, then a number of cases have to be included for each of the manifestations. Then such a large number of cases rapidly becomes necessary that it can no longer be handled within a project that is limited in time and personnel. It is therefore preferable to clarify which of these dimensions is the decisive one. Studies with a sensibly limited claim to generalization

are not only easier to manage but also, as a rule, more meaningful (for an example of this, cf. Hildenbrand 1983).

In qualitative research a distinction must be made between numerical and theoretical generalization. A very small number of projects claim either to want or to be able to draw conclusions from the cases investigated about a particular population. What is more informative is the question of the theoretical generalizability of the results obtained. Here the number of individuals or situations studied is less decisive than the differences between cases involved (maximal variation) or the theoretical scope of the case interpretations. To increase the theoretical generalizability, the use of different methods (triangulation, see 4.5, 4.6, 4.7) for the investigation of a small number of cases is often more informative than the use of one method for the largest possible number of cases. Here it must be decided whether the triangulation of methods can or should be applied to the case or to the set of data.

For the development of a typology, for example, it is necessary not only to use the target selection of cases, but to include counter-examples and to undertake case-contrasts in addition to case-comparisons (cf. Kelle and Kluge 1999: 40ff.).

Under aspects of generalization it is also necessary to attend to the question of what additional gain may be expected from triangulation with qualitative (see 4.6) or with quantitative methods (see 4.5), and how this may be reconciled with the available resources.

Finally, it needs to be considered what presentation goals (see 5.22) are involved in a qualitative study: is the empirical material the basis for the writing of an essay (Bude 1989), or rather for a narrative presentation that would give it more of an illustrative function? Or is it a matter of providing a systematization of the variation found in the cases investigated?

Degree of standardization and control

Miles and Huberman (1994: 16ff.) distinguish between tight and loose research design and see indications for both variations in concrete cases according to the research question and conditions: tight research designs are determined by narrowly restricted questions and strictly determined selection procedures, where the degree of openness in the field of investigation

and the empirical material is relatively limited. These designs are seen by the authors as appropriate when researchers lack experience of qualitative research, when the research operates on the basis of narrowly defined constructs, and when it is restricted to the investigation of particular relationships in familiar contexts. In such cases they see loose designs as a roundabout route to the desired result. Tighter designs make it easier to decide what data or extracts from the data are relevant to the investigation and what is not relevant, and they also make it easier, for example, to compare and summarize data from different interviews or observations.

Loose designs are characterized by somewhat broadly defined concepts and have, in the first instance, little in the way of fixed methodological procedures. Miles and Huberman see this type of design as appropriate when a large measure of experience is available of research in different fields, when new fields are being investigated and the theoretical constructs and concepts are relatively undeveloped. This second variant is clearly oriented to the methodological suggestions of Glaser and Strauss (1967; see 2.1, 5.13), which are characterized, for example in their handling of theoretical sampling, by great openness and flexibility.

Even though qualitative research often sees itself as indebted to the principle of openness (Hoffmann-Riem 1980), it is sensible for many questions and projects to consider what degree of control is necessary: to what extent must there be constancy in the contextual conditions in which the comparative differences between two groups are manifested (see above)? What degree of control or comparability should be provided in the conditions under which the various interviews in a study are carried out?

Selection: sampling and formation of groups for comparison

Selection decisions in qualitative research focus, on the one hand, on persons or situations from which data are collected, and, on the other hand, on extracts from the material collected, from which novel interpretations are made or results are presented as examples (cf. Flick 2002: 65–72). In this, theoretical sampling is considered to be the royal way for qualitative studies. Frequently, however, other selection strategies are more appropriate (cf. for

example the suggestions in Patton 1990), if the goal is not to do with theory development but rather with the evaluation of institutional practice.

One essential component of the decision about data selection (in comparative investigations) is the formation of groups for comparison. Here it must be clarified at what level the comparisons are to be made: between individuals, situations, institutions or phenomena? Accordingly, the selection should be made in such a way that several cases are always included in a single group for comparison (see 4.4).

Resources

One factor that is frequently undervalued in the development of a research design is the available resources (time, personnel, technical support, competences, experience and so on). In research, proposals are frequently based on an unrealistic relationship between the planned tasks and the personnel resources that can (realistically) be asked for.

For realistic project planning it is advisable to make a calculation of the activities involved, which assumes, for example, that an interview of around 90 minutes will need as much time again for locating interview-partners, organizing appointments, and travel. With regard to the calculation of time for transcribing interviews (see 5.9), the estimates will diverge widely – depending on the precision of the system of transcription to be used. Morse (1994: 232f.) suggests that, for fast-writing transcribers, the length of the tape containing the interview recording be multiplied by a factor of 4. If checking the finished transcript against the tape is also included, the length of the tape should be multiplied by a total of 6. For the complete calculation of the project she advises that the time allowed be doubled to allow for unforeseen difficulties and 'catastrophes'. In planning a project that will work with transcribed interviews, a high-quality tape recorder should always be used for the recordings, and a special instrument with a foot-operated switch is essential for transcription. Sample plans of how to calculate the time parameters of empirical projects are to be found in Marshall and Rossman (1995: 123ff.). The time needed for data interpretation is difficult to calculate. If a decision is taken to use computers and programs such as

ATLAS.ti and NUD*IST (see 5.14; Part 7) for data interpretation, then it is essential to include in the plan sufficient time for technical preparation (installation, removal of errors, induction of team-members in the use of the program, and so on).

In the process of approving a project the equipment asked for is sometimes reduced and additional methodological stages, such as an additional group for comparison or phase of data collection, may be required. At this stage, if not before, it becomes essential to check the relationship between tasks and resources, and short-cut strategies in the methodological procedures should, if necessary, be considered.

4 SHORT-CUT STRATEGIES

Many of the qualitative methods in current use are connected with a high degree of precision and an equally high investment of time – in data collection (here we might mention the narrative interview, see 5.2), in transcription (see 5.9), and in interpretation (for example, the procedures of objective hermeneutics and theoretical coding both require a great deal of time, see 5.16, 5.13). In externally funded projects and commissioned research, but also in graduate theses, this need for time is confronted with a very tight deadline within which the research questions have to be answered (see 6.5). Under the label 'short-cut strategies' (justifiable) deviations from the maximum requirements of precision and completeness are discussed. For instance, the suggestions of Meuser and Nagel (1991) on the setting up of interviews with experts provide guidance that deserves to be taken seriously on the framing of qualitative interviews with interview partners who are under great pressure of time. The same is true of the suggestions made by Strauss (1987: 266), O'Connell and Kowal (1995a, see 5.9) and others that only parts of interviews be transcribed, and only as precisely as is actually required by the questions of the particular investigation. The non-transcribed sections of interviews can be kept within the research process, for instance by means of summaries or lists of topics, to be transcribed if necessary. After phases of open coding (see 5.13) there is often an excessive quantity of codes or categories. In addition to simplifying the administration and ordering of such categories through computer programs such as ATLAS.ti (see Part 7; 5.14), it has often

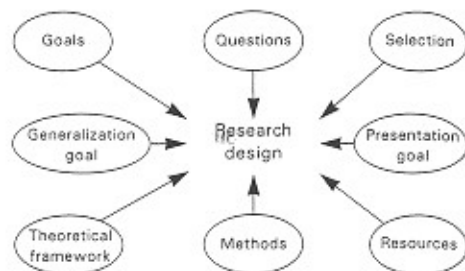


Figure 4.1.2 Components of qualitative research design

proved useful to draw up lists of priorities related to the research questions that make it possible to select and reduce the categories. The same may be said of the selection of textual contexts, based on the research question, which are required to undergo a process of intensive interpretation.

5 SUMMARY

Research designs may ultimately be described as the means of achieving the goals of the research. They link theoretical frameworks, questions, research, generalization and presentational goals with the methods used and resources available under the focus of goal-achievement. Their realization is the result of decisions reached in the research process. Figure 4.1.2 summarizes again the influential factors and decisions that determine the concrete formulation of the research design.

FURTHER READING

- Flick, U. (2002) *An Introduction to Qualitative Research*, 2nd. edn. Thousand Oaks, CA: Sage. esp. chs 5–7.
- Marshall, C. and Rossman, G. B. (1995) *Designing Qualitative Research*, 2nd edn. Thousand Oaks, CA: Sage.
- Maxwell, J. A. (1996) *Qualitative Research Design – An Interactive Approach*. Thousand Oaks, CA: Sage.