QUALITATIVE TEXT ANALYSIS

A Guide to Methods, Practice & Using Software

UDO KUCKARTZ

Los Angeles | London | New Delhi
Singapore | Washington DC
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Analysing Qualitative Data – But How?

In this chapter, you will learn more about:

- The difference between qualitative and quantitative data.
- The ambiguity of the term ‘qualitative data analysis’.
- The relationship between qualitative, quantitative and mixed methods research.
- The importance of the research question in an analysis.
- The need for methodological rigour in qualitative research.

1.1 Qualitative, Quantitative – A Few Clarifications

What do the terms ‘qualitative data’ and ‘quantitative data’ mean? While the term ‘quantitative data’ is directly associated – even by laymen – with numbers and statistics, and likely with costs in economic fields, the term ‘qualitative data’ is not equally self-explanatory, as it has very different meanings in various scientific disciplines as well as in everyday life. In human resources, for example, it entails areas such as employee satisfaction, motivation, and work environment as opposed to quantitative (hard) data, such as personnel costs, headcount, etc. For geographers, the number of inhabitants in various communities represents typical quantitative data, while classifying a municipality into zones involves qualitative data. In psychology, qualitative data often refers to data of the scale type nominal or categorical, i.e. actual data from the field of standardized (quantitative) research. There you will even find textbooks that introduce the term ‘qualitative data’ in the title, but which actually involve quantitative analysis methods for categorical data.
This book is based on the following pragmatic definition of quantitative and qualitative data:

Numerical data, or numbers, are considered quantitative data. Qualitative data are more diverse in contrast and can include texts as well as images, movies, audio-recordings, cultural artefacts, and more.

Despite the multimedia revolution that took place in the last decade, and despite the noted epochal shift towards the visual in our culture, text is still the dominant type of qualitative data in social sciences, psychology, and education. The methods of qualitative data analysis described in the following are originally designed for the data type ‘text’ and texts will be used in the examples shown. Theoretically, the methods can be transferred to other types of qualitative data such as images, movies, audio-recordings, etc.

Unlike the attitude often found in textbooks on social research methodology, I do not view qualitative data as inferior to other (quantitative) types of data. There is no hierarchy of analytical forms similar to that of scales – which includes nominal, then ordinal, and finally interval scales on the highest level. ‘Real science’ does not begin with numbers, quantification, and statistical analysis of data. One glance at other scientific disciplines proves this point. In many branches of science, including geophysics and medicine, scientists work with non-numerical data, such as in the field of advanced medical imaging techniques (MRI, NMRI, etc.). Qualitative data are by no means a weak form of data; rather, they are a different form that requires different, complex and systematic analysis.

An interesting aspect in this context has been introduced by Bernard and Ryan (2010, pp. 4–7). They have pointed out the ambiguity of the term ‘qualitative data analysis’, which is immediately apparent when the three words ‘quality’, ‘data’, and ‘analysis’ are linked together in different ways. While qualitative data analysis refers to the analysis of qualitative data in the above sense of texts, images, films, etc., qualitative data analysis can mean the qualitative analysis of data of any kind, that is, both qualitative and quantitative data. Differentiating between data and analysis results in the following four-cell table (according to Bernard & Ryan, 2010, p. 4)¹:

The chart presents two expected and two unexpected cells. The upper left Cell A and the lower right Cell D appear well known to us: Cell A includes the qualitative analysis of qualitative data in the form of hermeneutical analysis,

¹The table is based on the earlier differentiation by Bryman (1988), which differentiated between qualitative and quantitative research, not data. Bryman called the cells B and C ‘incongruent’.
grounded theory, or other qualitative analysis techniques. Cell D, quantitative analysis of quantitative data, is also familiar to us. This involves the use of statistical methods, i.e. the typical process for analysing numerical data.

The table also includes two cells that we may not necessarily expect, namely the qualitative analysis of quantitative data (Cell B) and the quantitative analysis of qualitative data (Cell C). The latter may include the analysis of word frequencies and word combinations. The qualitative analysis of quantitative data (Cell B), which involves interpreting quantitative data, begins when the statistical methods are calculated and the results are presented in the form of tables, coefficients, and parameter estimates. At this point it’s time to identify and interpret the meaning of the results. Without this interpretive step, the quantitative analysis of raw figures remains sterile and literally meaningless. As Marshall and Rossman emphasized, the interpretive act is inevitable:

> The interpretive act remains mysterious in both qualitative and quantitative data analysis. It is a process of bringing meaning to raw, inexpressive data that is necessary whether the researcher’s language is standard deviations and means or rich descriptions of ordinary events. Raw data have no inherent meaning; the interpretive act brings meaning to those data and displays that meaning to the reader through the written report. (2006, p. 157)

Bernard and Ryan’s differentiation makes it clear that the type of data does not necessarily determine the type of analysis. If you move away from such a strict connection between data type and type of analysis, it is clear that both a quantitative analysis of qualitative data, as well as a qualitative analysis of quantitative data, are possible. Thus, there is no reason to suspect a deep divide between the qualitative and quantitative perspectives. In everyday life, as in science, human beings have a natural tendency to combine methods. We always try to keep both perspectives – the qualitative and the quantitative aspects of social phenomena – in mind.
1.2 Qualitative, Quantitative and Mixed Methods Research

You would expect that a book on the analysis of qualitative data would not only define the terms ‘qualitative data’ and ‘quantitative data’, but would also give a definition of the term ‘qualitative research’, which goes beyond ‘collection and analysis of non-numeric data’. There are many relevant definitions and many attempts to compare quantitative and qualitative research.

Flick’s textbook, *An Introduction to Qualitative Research* (2006), begins with a note on the dynamics of qualitative research:

> Qualitative research is an ongoing process of proliferation with new approaches and methods appearing and it is being taken up by more and more disciplines as a core part of their curriculum. (p. xi)

In the latest edition of their handbook on qualitative research, Denzin and Lincoln emphasize the diversity of qualitative research, which shows how impossible it is to provide a ‘one-size-fits-all’ definition:

> The open-ended nature of the qualitative research project leads to a perpetual resistance against attempts to impose a single, umbrella-like paradigm over the entire project. There are multiple interpretive projects, including the decolonizing methodological project of indigenous scholars; theories of critical pedagogy; performance (auto) ethnographies; standpoint epistemologies, critical race theory; critical, public, poetic, queer, materialist, feminist, reflexive, ethnographies; projects connected to the British cultural studies and Frankfurt schools; Grounded Theorists of several varieties; multiple strands of ethnomethodology... (2011, p. xiii)

Qualitative research includes a variety of individual, sometimes exotic methods and techniques. In the early 1990s, Tesch tried to organize the diversity of approaches to qualitative research in a mind-map style table. The result was a collection of nearly 50 different qualitative approaches, trends and forms of analysis, ranging from ‘active research’ to ‘transformative research’ (Tesch, 1992, pp. 58–59). Tesch arranged the various approaches in a cognitive map and differentiated between the approaches according to whether the research interests were based on: a) the characteristics of language; b) the discovery of regularities; c) understanding the meaning of the text or the act; or d) depends on reflection.

It seems that almost every author of a qualitative methods textbook feels committed to creating a new systematization of qualitative approaches. The results of such systematization vary: almost a decade later, Creswell’s differentiation, for
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example, is completely different than Tesch’s. Creswell distinguishes between five different (main) approaches of qualitative research: ‘narrative research’, ‘phenomenology’, ‘Grounded Theory research’, ‘ethnography’ and ‘case study’ (Creswell, in Miller & Salkind, 2002, pp. 143–144). Tesch’s differentiation is geared primarily towards the researcher’s interests while Creswell focuses on epistemological and pragmatic aspects. Thus, Creswell does not aim to construct a comprehensive systematization; rather, he examines the most frequent approaches used in practice.

While this is not the place for a synopsis of the great diversity in systematization, the variety of qualitative approaches explains why there is no underlying, unified theoretical and methodological understanding (see Flick, 2007a, pp. 29–30). Accordingly, the definitions of ‘qualitative research’ vary greatly. Some elements, including case-orientation, authenticity, openness and integrity, can be found in almost every definition. It will suffice here to refer to Flick, von Kardorff, and Steinke’s (2004, p. 9) 12 characteristics of qualitative research practice:

1. Spectrum of methods rather than a single method
2. Appropriateness of methods
3. Orientation to everyday events and/or everyday knowledge
4. Contextuality as a guiding principle
5. Perspectives of participants
6. Reflective capability of the investigator
7. Understanding as a discovery principle
8. Principle of openness
9. Case analysis as a starting point
10. Construction of reality as a basis
11. Qualitative research as a textual discipline
12. Discovery and theory formation as a goal.

In textbooks on research methods, however, you will find a comparison of quantitative versus qualitative research. Oswald argues, in his handbook article, ‘What is qualitative research?’ (Oswald, 2010), that qualitative and quantitative methods are located on a continuum, i.e. there are similarities and overlaps, and a variety of useful combinations between them. According to Oswald, there are qualitative characteristics (usually called categorical data) in quantitative research and the results of statistical analysis are interpreted. This argument is very similar to the aforementioned argument by Bernard and Ryan. Conversely, qualitative research often includes a quasi-quantification, which is reflected in the use of terms such as ‘frequently’, ‘rarely’, ‘usually’, ‘typically’, etc. The following instructive description of the difference between qualitative and quantitative research results from Oswald’s considerations:
Qualitative research uses non-standardized methods of data collection and interpretive methods of data analysis, where the interpretations are not only related to generalizations and conclusions, as in most quantitative methods, but also to the individual cases. (Oswald, 2010, p. 75; translated from German)

What already shines through in Oswald’s position, namely that qualitative and quantitative methods are not mutually exclusive, has been the focus of the discourse on mixed methods, which has developed into a sort of movement in the Anglo-Saxon realm, particularly in the US, over the course of the last decade. The mixed methods approach is – according to its protagonists – a new and modern methodological approach, which tries to overcome the old duality of approaches in a new, third paradigm. Scholars such as Creswell, Plano, Tashakkori, Teddlie, and many others have formulated the mixed methods approach in great detail and developed a variety of precise design proposals for mixed methods research. These authors’ proposals for practical research projects are extremely interesting and relevant in many scientific disciplines. Methodologically, Udo Kelle’s work to integrate methods should be taken into account within this context (Kelle, 2007b). While the mixed methods approach requires pragmatism (see Creswell & Plano Clark, 2011, pp. 22–36), Kelle’s approach (2007b) is epistemological, beginning with the controversy regarding the role of explanation and understanding that shaped the humanities and natural sciences for more than 100 years. His concept of the integration of methods is methodological and he attempts to substantiate the combination of methods on a much more profound level. Kelle goes back to the dawn of empirical social research and the qualitative-quantitative controversy, and asks how it is possible to develop empirically-based theories in the social sciences and arrive at a concept of ‘causal explanation’, which, in principle, we already find in Max Weber’s research (see Kuckartz, 2009).

1.3 The Challenge of Analysing Qualitative Data in Research Practice

The methodological orientation of empirical research in the social, educational, health, and political sciences and to a lesser degree in psychology has shifted since the early 1990s – qualitative research, which lagged behind even

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2Tashakkori and Teddlie’s SAGE Handbook of Mixed Methods (2010) provides a good overview of the many facets of the mixed methods approach.
in the 1980s, has establish itself and is increasingly popular today, especially among young scientists. Meetings and conferences, such as the Berlin Methods Meeting\(^3\) or the International Congress of Qualitative Inquiry,\(^4\) are evidence of the great resonance that qualitative research has produced worldwide today.

Along with this shift towards qualitative research methods, the amount of appropriate methods literature that is available has increased, especially literature in English. Most of this literature on qualitative methods and mixed methods is mainly concerned with data collection and design, while questions of qualitative data analysis are given less attention. If one considers, for example, the latest edition of Denzin’s and Lincoln’s ‘The SAGE Handbook of Qualitative Research’ (2011), one finds only three contributions that deal explicitly with data management and models of analysis.\(^5\)

In an online German doctoral forum, I recently read a graduate student’s plea for help:

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Hello,

I really wanted to create an online survey for my MA thesis (it’s about differentiation/separation in the relationship of grown-up children to their parents). Since my constructs are difficult to understand, my supervisor recently said: Have you ever thought about tackling the whole research project qualitatively and conducting interviews?

Hmm. Now I am rummaging through a lot of literature, mostly from the social sciences. But I simply cannot find anything tangible for analysing qualitative data. This is all very vague. And I would really like to report some results at the end. Feeling a little hopeless at the moment. Can anyone here give me any tips?

Regards,
Dana
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This grad student, Dana, is right: A tangible and concrete method for analysing qualitative data is not easy to find. And that is where this book comes in – our

\(^3\)Website: www.berliner-methodentreffen.de

\(^4\)Under the direction of Norman Denzin, this conference is held annually in Urbana, IL (USA), see www.icqi.org.

\(^5\)Whereas in the past there was little special literature on qualitative data analysis available – like Dey (1993) or Miles & Huberman (1995) – the situation has changed in the last few years. See for instance, the books of Gibbs (2009) and Bernard & Ryan (2010), which deal with a variety of methods for analysis.
aim is to show ways in which qualitative data can be analysed and methodology controlled in a systematic manner. To collect qualitative data is interesting and exciting and it is usually feasible without major methodological problems. The difficulties with which researchers are faced in the early stages of a project are more related to field access or the researcher’s own behaviour in the field, rather than the methods employed to collect the information in the narrower sense. But what comes after you have collected the information, recorded interviews with a recording device, for example, and after you have transcribed the interviews, or written field notes or collected data in the form of videos?

Students are not the only ones who feel unsure at this point in the research process and avoid the risks associated with qualitative research because the analysis process and the individual steps of the evaluation are not described precisely and in enough detail in the literature and are therefore difficult to carry out. Even in major projects funded by national agencies, there are often very imprecise descriptions of the approach to data analysis. Researchers often use empty phrases to merely describe that they ‘based their analysis on the Grounded Theory’, ‘interpreted according to Silverman’, ‘on the basis of qualitative content analysis’, or by ‘combining and abbreviating different methods’. A precise, well-understandable representation of the procedure is often omitted.

On the other hand, the mentality ‘anything goes’ can often be found in the discourse on methods of qualitative data analysis: Researchers who read qualitative methods texts and come to such a conclusion believe that they can more or less do what they want, make glorious interpretations, let their own imaginations and associations have free rein, without the danger of strict methodologists rejecting them and/or putting them in their place. They can even call on the constructivist and postmodern positions encountered in the discussion of the quality standards for qualitative research, which emphasize that the social world itself is constructed cognitively and that multiple worlds and world-views exist side by side; thus, the question of universal and objective quality standards would become obsolete. Such positions are not shared in this book. It seems to me that Seale’s position of a ‘subtle realism’ (Seale, 1999b) is convincing – in the discourse on the quality of qualitative research, Seale pleaded pragmatically (based on Hammersley’s work (1992)) for a compromise between the two extremes, namely between the adherence to the rigid rules of classical research concepts (objectivity, reliability, validity) on the one hand and the rejection of general criteria and standards on the other. Promoting the formulation of appropriate quality standards and precise descriptions and documentation of analytical procedures (see Chapter 6) would undoubtedly

\footnote{‘Anything Goes’ by the American philosopher of science Paul Feyerabend (1975) was not meant as a licence to allow researchers to do anything they wanted methodically speaking, but as an invitation to use creative methods in their research.}
increase credibility and reputation when addressing a ‘sceptical audience’ (Seale, 1999b, p. 467) as well as research institutions.

1.4 The Importance of the Research Question

The pivotal point of any research project is the research question: What would you like to achieve through the research project? What is the specific problem that you would like to explore? Why and with what practical purpose? What type of investigation should be conducted to obtain information about the research question, and what methods are most suitable?

Miller and Salkind distinguish between three basic types of research, which are reflected in corresponding designs: basic, applied, and evaluation research (Miller & Salkind, 2002). Although basic research is ideal for experimental methods and testing of hypotheses, in general all three types of research may work with both qualitative and quantitative methods. According to Miller and Salkind, the various directions of research questions constitute the differences between the methods:

They are not another way to answer the same question. Instead, they constitute a relatively new way to answer a different type of question, one characterized by a unique approach with a different set of underlying assumptions reflecting a different worldview of how individuals and group behaviour can best be studied. (Miller & Salkind, 2002, p. 143)

Other textbooks distinguish between four types of studies: exploratory, descriptive, hypothesis-testing, and evaluative studies (see Diekmann, 2007, pp. 33–40). Both qualitative and quantitative methods can be used in all four types of study, and it is also possible to combine both methods within one type of study. The proportion of qualitative methods is different for the different types of studies. While mostly qualitative methods can be found in exploratory studies, descriptive studies, which will give the most generalized overview possible, rely on more quantitatively oriented survey research. The starting point for all four types of study is the research question. Without such, research is hard to imagine. Because no matter whether you are planning a master thesis, or a dissertation, or a research proposal for which you wish to receive external funding, the first step is always to face the challenge of drawing up an exposé, a research plan, or research proposal, in which the presentation and discussion of the research question plays a central role.
In formulating the research question you should always ensure the theoretical background and reflect on your own prior knowledge, then ask yourself: How much have I thought about the field of research? What other research already exists? Which theories seem to have explanatory power regarding my research question? What prejudices do I have myself and what prejudices are common among the scientific community of which I am a part?

To ask such questions is not in contrast with the idea of openness that is characteristic of qualitative research. The common assumption that researchers can be a ‘tabula rasa’ or a ‘blank slate’, able to devote themselves to a research subject entirely without prior knowledge, is an illusion (see Kelle, 2007a, 2007b). Prior knowledge is always a factor, as the researcher’s brain is never ‘empty’. Even if after well-founded consideration, you choose not to refer to existing research results because you would like to approach your research question and approach the field ‘without prejudice’, you should reflect on your reasons for doing so and record them on paper. The mere reference to scholars who recommend such a theory-free and unprejudiced approach is not sufficient to justify it; instead it requires reflection regarding exactly why such a theory-abstinent approach for answering your research question is appropriate and why this promises better results. We often find statements referring to the grounded theory, noting that it is counter-productive to read books on the topic of research as a research methodology. This discredits qualitative approaches. In the various approaches of today’s grounded theory, this misunderstanding, found in the early reception of texts on grounded theory itself (Glaser & Strauss, 1998), has been corrected (Cisneros-Puebla, 2004; Kelle, 2007a, 2007c).

Of course, there are situations in social research in which it is advantageous to gain experience in the field first. For instance, anyone who wants to observe and experience how homeless people live should not simply plan to sit in the library reading the sociological and psychological literature on homeless people. On the other hand, it is hard to imagine that anyone who wants to analytically explore the causes of right-winged thinking in adolescents would consistently ignore all of the research literature that already addresses that very problem. In this book, the position is taken that it is wise and necessary to start with the existing research when exploring social phenomena. I agree with Christel Hopf, who encouraged researchers to delve through the current state of research on the chosen topic:

> Therefore, there is no reason to prematurely view the independence of your own judgment pessimistically, thus destroying many opportunities for gaining insight that are associated with theory-driven, empirical studies based on existing research. (Hopf & Schmidt, 1993, p. 17)\(^7\)

\(^7\)Translated from German.
1.5 The Need for Methodical Rigour

What is the justification for analysing qualitative data in a systematic manner and according to strict rules? Does such an approach hinder the creativity and openness of qualitative methods? In qualitative research since the mid-1990s, issues of quality and validity have been discussed intensively. Three principal positions are taken regarding the acceptance and transferability of existing quality standards for quantitative research:

a) Universality: The same standards are valid for qualitative research as for quantitative research.
b) Specificity: Specific standards that are appropriate must be formulated for qualitative analysis.
c) Rejection: Quality standards are generally rejected for qualitative research.

Flick (2006, pp. 379–383) adds a fourth position, namely, that researchers should be able to answer the question of quality beyond the formulation of standards, such as in the form of total quality management, which takes the entire research process into account. For the general discourse on the quality standards for qualitative research, it will suffice here to refer to relevant contributions (Flick, 2007a; Seale, 1999b; Steinke, 2004). At this point, the topic will be considered with a focus on the method of qualitative text analysis, and the second of the above positions will serve as a basis – namely that specific, appropriate standards for qualitative research must be formulated and not simply carried over from quantitative research. Inspired by the psychological test theory, standards for objectivity, reliability and validity have been established in quantitative research, which can be found in almost every textbook of social research methods. These quality standards are based on the scientific logic of measurement and more oriented towards measurable variables (e.g. reliability coefficient). Standards for the quality of qualitative research, however, cannot be based on calculations and measures, as the data for such a calculation is missing. Thus, following Flick (2006), the standards themselves must be more process-oriented.

In recent years, increased efforts have been made to canonize and ‘precisify’ qualitative and mixed methods research procedures and to discuss aspects of quality (Flick, 2006, pp. 367–383). In particular, the work of Clive Seale has been given a lot of attention. Seale and Silverman (1997, p. 16) pleaded, as shown above, in favour of ensuring rigour in qualitative social

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*A good example is the work of John Creswell concerning the different designs of mixed methods research.*
research and the construction of quality criteria. Does this mean that we have to take over the logic behind the quality standards of quantitative research and apply fixed technical evaluation instruments? Seale’s position of ‘subtle realism’ is a middle road beyond loose acceptance or rejection of the classical quality standards. The standards within quantitative research cannot be carried over directly to qualitative research.

Qualitative research is carried out in natural settings and differs from the hypothetico-deductive research model. There, the focus is on testing hypotheses and the goal is to find correlations and create causal models that can be generalized. Qualitative research can generalize, too, but this is its not main purpose. In particular, the broad generalization that is inherent in the research logic of the hypothetico-deductive model, is a foreign concept in qualitative analysis (Seale, 1999b, p. 107). Ultimately, the goal of the hypothetico-deductive model is to discover patterns and even laws with universal and long-term validity, while in qualitative research, in particular in the theory-building Grounded Theory, the goal is to establish middle-range theories.

What, specifically, are the reasons to proceed with methodical rigour when analysing qualitative data? Five aspects are important arguments for systematic kinds of analysis and qualitative text analysis in particular:

- Against anecdotalism: Systematic analysis avoids the trap of ‘anecdotalism’, since all of the data are included in the analysis and not only selected quotes are presented.
- Transparency: A detailed and transparent description of the analysis process increases the general understanding for the scientific community and other interested readers.
- Trustworthiness: Trust in the researchers and the results of their research is increased when specific standards are followed.
- Reputation: Methodological standards allow qualitative researchers to improve their reputations beyond their scientific communities.
- Increase interest and acceptance of funding institutions.

Methodological rigour also deals with the problem of quantification in qualitative research:

Yet, as I showed in the last chapter, numbers have a place within qualitative research, assisting, for example, in sensitive attempts to learn lessons in one place that have relevance for actions and understanding in another place. There is a variety of other uses of numbers which can enhance the quality of qualitative research ... (Seale, 1999b, p. 120)
As a result of his very instructive overview of the benefits and use of numbers in qualitative research (see Seale, 1999b, pp. 119–139), Seale formulated the principle of 'counting the countable'. Numbers can assume different functions; they can represent not only simple frequencies or percentages, but also be used for more complex statistical calculations, such as cross-tabs with chi-square test or cluster analysis. They can clarify arguments and support theories and generalizations. Seale’s emphasis on ‘avoiding anecdotalism’ expresses the importance of using numbers quite concisely (Seale, 1999b, p. 138).