



Analysing Qualitative Data

A Guide for University and College Practitioners

—

Dr Kevin Guyan, Researcher, Advance HE

Contents

1.	Introduction	3
2.	Why use qualitative data?	4
3.	How to gather qualitative data	5
4.	How to analyse qualitative data	6
5.	Going further – other uses of qualitative data analysis	10
6.	Conclusion	11

1. Introduction

Advance HE's sixth Research and Data Briefing presents guidance on how to analyse qualitative data, such as focus group transcripts or free-text survey responses. This briefing is intended for university and college practitioners working on small- to medium-scale research projects in the areas of equality, diversity and inclusion, teaching and learning, and governance, leadership and management. It does not assume any prior knowledge of qualitative research methods. As a practitioner you might be required to gather and analyse qualitative data as a means to demonstrate the success or failure of an initiative, report on progress or help make sense of a problem in your institution. You might already collect information via feedback forms, surveys, comment cards and one-to-one conversations but, even with all of this available data, remain unsure how to analyse and report on your findings when staff time and research resources are limited.

This briefing will focus on the analysis of qualitative data across four sections:

- + Why use qualitative data?
- + How to gather qualitative data
- + How to analyse qualitative data
- + Going further – other uses of qualitative data analysis

The guidance focuses on one approach to qualitative analysis – inductive thematic analysis – as it is well-suited to different sized projects and produces results that enable practitioners to express their findings qualitatively and quantitatively. Other approaches to qualitative analysis exist and are outlined later in the briefing.

This briefing is mindful of the contexts in which practitioners work and the potential gulf between what is possible, in terms of research and data, and what is practical with limited resources and competing commitments. The guidance builds upon previous Advance HE Research and Data Briefings, in particular [Working with Data](#) and [Monitoring and Evaluating Impact](#).

2. Why use qualitative data?

Qualitative data is information about qualities that are not numerical and therefore not quantifiable, such as 'happiness' or 'confidence'. This data provides experiential insights that help answer the 'how' and 'why' questions of research projects. Qualitative data is particularly useful for assessing 'soft' or less tangible project outcomes, such as 'female engineering students will feel more confident about their skills'. When used alongside quantitative data (numerical data that is quantifiable), qualitative data can explain why numbers increase, decrease or remain unchanged.

Although qualitative and quantitative data describe two ways in which we perceive and experience the real world, the two data types often overlap as researchers quantify qualitative phenomena. For example, staff and student surveys might ask respondents to express their satisfaction with university premises on a five-point scale that ranges from 'Very satisfied' to 'Very dissatisfied'. Although satisfaction is a qualitative concept, as it is something not easily counted, the survey gathers quantitative data by asking respondents to position their satisfaction on a scale of one to five. The use of a scale transforms satisfaction into something quantitative, which researchers can then analyse using statistical software. For this reason, scaled or numerical survey responses are not discussed in this briefing.

Qualitative data is particularly useful in research projects that engage a small number of participants. In some areas of your institution, such as individual departments or faculties, the small number of staff or students makes it impractical to undertake quantitative research. Equality and diversity practitioners, in particular, can encounter challenges when they attempt to capture the experiences of staff from a specific ethnic group or take an intersectional approach that looks across multiple protected characteristics. In these examples, the small number of potential participants means that the average scores to survey responses would be unreliable.

Whereas quantitative methods, such as staff and student surveys, become more reliable when more people respond, the effectiveness of qualitative methods does not depend on the total number of people who participate. Instead, qualitative research methods work well with small numbers of participants, as long as participants are generally representative of the larger population you wish to study. For example, it is not practical or necessary to invite every member of staff to attend a focus group or one-to-one interview. Likewise, only speaking with male professors in the chemistry department is unlikely to present an accurate account of all staff views.

What does quantitative data overlook?

When writing about qualitative versus quantitative data, attention too often focuses on the benefits of using qualitative data rather than the limitations of adopting a quantitative-only approach. Approaching this debate from an alternative direction, it is helpful to ask: 'What does quantitative data overlook?'

Researchers working with numerical data can calculate totals and percentages in a variety of ways. For example, institutions might calculate their gender pay gap (the percentage difference between average pay for men and women) using the salaries of all staff (a headcount) or weight staff to take account of those that work part time or across different parts of the institution. This figure might include or exclude atypical or agency staff. In terms of averages, mean and median figures might also differ, which presents opportunities for those framing the results to present their interpretation of the data. Language is also important and can manipulate the presentation of quantitative data as much as qualitative data. For example, 'Female professors have doubled in the past year in our department' sounds better than 'The number of female professors has increased from two out of 40 to four out of 40 in the past year'.

If you are a practitioner engaged in equality, diversity and inclusion, teaching and learning, or governance, leadership and management, the participants in your research are most likely staff or students. However, an over-focus on quantitative data can risk ignoring the lived experiences of the staff and students behind the numbers. As an example, consider the ethnic diversity of your institution's senior leadership team. Quantitative

data might show that representation of BME senior leaders has increased by 20% in the past three years. But these figures may be misleading as they say nothing about whether these BME leaders feel valued, if others listen to their opinions or if they perceive their position to be tokenistic.

Encouraging senior leaders to look beyond headline statistics

A key challenge for university and college practitioners is to frame their findings in a way that appeals to senior leaders in their institution. Pressure to present 'headline stats' might tempt practitioners to devote more attention to quantitative data above qualitative data. Likewise, practitioners might worry that qualitative findings are less 'representative' than quantitative findings. These concerns are misplaced and, as demonstrated in this briefing, qualitative data, when analysed effectively, can also present headline findings.

3. How to gather qualitative data

Before undertaking analysis, it is first necessary to gather the data. The following questions should be considered to ensure that the data gathered is appropriate for analysis:

What data should I gather?

Establishing the research questions is the first step in working with data as it will inform which method(s) are used and the types of data that need to be gathered. The number of research questions asked will depend on the scope and size of the project. Research questions should be specific and relate to one phenomena only. In other words, ask yourself: What question do I want answered? What information will answer this question? How do I get this information?

How should I gather the data?

The method(s) you choose will depend on the type of data you wish to collect. Methods might include one-to-one interviews (structured, semi-structured or unstructured), focus groups, surveys with free-text comment boxes or a review of existing documents/literature. If possible, consider a mixed methods approach that uses both quantitative and qualitative methods (eg a survey and focus groups). Using multiple methods will help offset the limitations associated with individual data collection methods (eg a focus group with one dominant participant or a survey with a low response rate). While gathering data, it can be useful to keep a notebook or Word document to capture your thoughts, feelings or impressions during the research process. Thinking reflexively about what you bring to the research project is a fundamental component of data gathering and is discussed in more detail in Advance HE's Research and Data Briefing on [Reflexivity: positioning yourself in equality and diversity research](#).

When should I gather the data?

When and how many times data should be collected will depend on your research questions and how the data will be used. For instance, if you are exploring or diagnosing a problem, gathering data at a single time point may suffice. In contrast, if the data is being used to monitor and evaluate the impact of an initiative, it will need to be collected at multiple time points (for example, before the initiative, after the initiative and long after the initiative) in order to capture the information needed to answer the research question.

Who should I gather data from?

When undertaking qualitative research it is not necessary to gather data from as many participants as possible. What is more important is to ensure that participants (the sample) are generally representative of the wider group you wish to study (the population). Participants do not need to mirror the demographics of the population exactly but they should, at the very least, bring a diversity of voices and experiences to the study. Involvement in the research will depend on the approach to participant recruitment: are you doing enough to ensure a diverse range of people can participate? Should incentives be offered to acknowledge participants' time and contributions? Before gathering data, take stock of what information you might already have at hand (eg free-text comments from past surveys) and explore whether analysis of this data can inform the study.

Research possibilities versus practitioners' realities

As a practitioner working on a small- to medium-scale research project, you are likely to have encountered the gap between what is possible, if time and resources were infinite, and what is achievable in the context of your institution. Projects take place in the real world so a briefing focused on research ideals rather than practitioners' realities is of little value. If time and resources are limited, rather than attempting a project that is too big, the golden rule is to focus on a smaller number of achievable research questions. In other words, do fewer things but do them well. Gathering data will require the most time and resources so, before running your own focus groups, interviews or surveys, check whether your institution holds any qualitative data that could be repurposed for your study (for example, free-text responses to past staff and student surveys). Data protection regulations mean that the use of these data for a new project will [depend on participants' original consent](#) but, if permissible, this could reduce the resources required for your qualitative study.

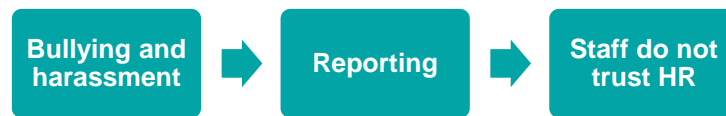
4. How to analyse qualitative data

Qualitative research can return data in a variety of formats (text, audio, visual, etc), which might require conversion to an alternative format before analysis can commence. This is most common with data gathered from interviews and focus groups, which are often recorded as audio files but are easier to analyse as text files or Word documents. It takes around one hour to transcribe 15 minutes of spoken word or costs approximately one pound per minute for professional transcription. If there is no budget for professional transcription or capacity to undertake this work yourself, consider how best to capture data from focus groups or interviews before starting the fieldwork. You might wish to ask another staff member to join the focus group as a scribe and note direct quotes or invite participants to share typed responses to some questions before attending a one-to-one interview. Although these solutions are not as comprehensive as full transcripts, they offer work-arounds that might suffice for a small- to medium-scale project.

Qualitative data from focus groups or interviews is best analysed in the form of transcripts, which present a verbatim account of what was said and enable researchers to 'code' the data. Coding involves careful and repeated reading of the data to identify and mark recurring or connected themes (using a 'code'). This approach, referred to as thematic analysis, is most effective when codes are designed so that they capture multiple levels of information, moving from the most general to the specific. For example:



In this example, a primary theme might reflect an overarching topic such as ‘Bullying and harassment’, followed by a primary code ‘reporting’ and a secondary code ‘staff do not trust HR’:



This coding structure makes it possible to mark other instances where ‘staff do not trust HR’, add contradictory codes (‘Bullying and harassment: reporting: staff trust HR’) or present other information on reporting (‘Bullying and harassment: reporting: process too complicated’). As the list of codes expands, it will become necessary to arrange codes in a logical order using a coding framework, in which codes are grouped according to primary theme and then listed in alphabetical order within each theme.

Coding software

For small-scale projects (eg those involving fewer than 20 free-text survey responses or a single focus group), you can code the qualitative data using printed copies, coloured highlighters and notes. For larger projects, specific software may be needed; specifically, Computer Assisted Qualitative Data Analysis Software (CAQDAS) will organise the data, help ensure consistent coding and provide tools for subsequent analysis. CAQDAS can support a variety of data formats, which makes it possible to code images, video and audio, as well as text. Qualitative researchers commonly use CAQDAS software such as Atlas.ti and NVivo. Although this software requires a license key, your institution might have already purchased access for staff and students. If not, free-to-use options are also available to download, such as [QDA Miner Lite](#).

Researchers can adopt a deductive or inductive approach to their data analysis, or a mix of both of these approaches. A deductive approach begins with a hypothesis (eg ‘LGBT staff face more institutional barriers to promotion than heterosexual/straight staff’) followed by reviewing and coding the data to either prove or disprove this theory. In contrast, an inductive approach, often known as grounded theory, does not begin with a hypothesis or any assumptions about what will emerge from the data. Advance HE’s qualitative research generally follows an inductive approach, in which data is explored with an open mind to see what it will reveal. Inductive research questions seek to identify the factors that lie behind observed phenomena, for example a university might believe staff are under-reporting instances of bullying and harassment but are unsure of the reasons why. This is not always easy as researchers bring their own backgrounds and experiences to the subjects of their study. Rather than pretend that these biases do not exist, it is better to acknowledge researchers’ subjectivities and work to mitigate their impact on the study. Use of a notebook or Word document for personal reflections, as previously suggested, will help highlight areas of a project shaped by a researcher’s background and experiences. Better still, having a colleague assist in the analysis phase of your project helps ensure that personal biases are kept in check. This approach also allows you to double check the reliability of your coding by comparing the themes you have identified in a transcript to those identified by your colleague.

Qualitative analysis will require more than one close reading of your data. Do not worry about marking too many codes during your first reading, as codes can be merged or deleted at a later stage. The most important thing to achieve during the first reading is to get a sense of what concepts and topics are present in the data, develop a draft list of codes and group these codes into loose, overarching themes.

The 'representativeness' of qualitative data

Following a number of individual complaints, a university history department wishes to diversify the content of its modules. The department's teaching and learning committee is asked to gauge the views of students and identify modules to revise. The university has recently sent multiple surveys to students and there is concern that a further survey will attract a low response rate. As an alternative, two focus groups are arranged to gather the views of undergraduate and postgraduate students. However, some academics in the department have expressed concern that focus group findings might not represent the views of all students in the department.

The 'representativeness' of qualitative data is a common concern, particularly among those who feel more comfortable with quantitative data. In this example, focus groups are not expected to present the views of an entire population (history students) but instead capture a diversity of perceptions and experiences. Focus group organisers should ensure participants come from diverse backgrounds, include a mix of protected characteristics and modes of study (ie full-time, part-time and distance learners), and are effectively facilitated to ensure everyone is able to express their views. For further guidance on focus group facilitation, see Advance HE's Research and Data Briefing on [Ethics in Primary Research \(focus groups, interviews and surveys\)](#).

After your first reading, it is often useful to take a break from the materials so you can then approach your second reading with a different objective: rather than focusing on locating new codes, instead try to fine tune your existing codes and ensure that they accurately reflect what is presented in the data. During your second reading, your code list will likely shrink in some areas (where codes are deleted or merged) and expand in other areas (where one code actually covers a few distinct concepts).

You might feel that a thematic approach to coding is too experimental, or 'unscientific', as it is not always clear where exactly you will end up. However, the flexible nature of thematic analysis is what allows it to work with smaller samples of participants and answer the 'how' and 'why' questions. This is all part of the process as you begin to think about the data holistically, rather than as individual pieces of information, and consider the connections and contrasts between and across the data.

Following a second round of coding, the coding framework is ready for further analysis. Table 1 presents an extract of a coding framework from qualitative analysis of focus group transcripts, with a total of 12 participants, focused on a university's board of governors. The framework includes primary themes on the left-hand side, primary and secondary codes in the middle, and the frequency and proportion of participants who mentioned each code on the right-hand side.

Quantifying qualitative data

A coding framework presents instances of each code and therefore presents a means of quantifying data extracted from qualitative materials. In the example presented in Table 1, calculating frequencies (in the 'No.' column) as percentages reveals that 91.7% of participants (11 out of 12) described the committee secretary as a gatekeeper. This will require you to filter code instances so that they only reflect the number of participants who mentioned a code rather than the total number of code mentions (eg five participants stating there are too many white men on the board of governors is different from one participant raising this point five separate times in the focus group). Your report can present the coding framework as a table, include information from the framework in the narrative and/or use visual methods such as heat maps, which show the most frequent codes in red and the least frequent codes in green.

Table 1. Focus group on a university's board of governors (n = 12 participants)

Following two rounds of coding it becomes apparent that the code 'people : secretary : makes it hard to share information with other governors' (mentioned by five participants) and 'people : secretary : discourages communication between staff and governors' (mentioned by six participants) expressed a similar sentiment so were merged to form 'people: secretary: gatekeeper' (now mentioned by 11 participants).

Themes	Codes	No.	%
People	chair: ensures all attendees can contribute equally	1	8.3
	chair: favours some attendees over others	4	33.3
	secretary: communicates effectively	2	16.7
	secretary: is a gatekeeper	11	91.7
Activities	meetings: are too frequent	2	16.7
	external engagement: limited opportunities	9	75.0
	external engagement: limited opportunities: but has improved	6	50.0
	external engagement: need to work with other committees	7	58.3
Challenges	recruitment: limited applications to join the board	11	91.7
	recruitment: board vacancies were not advertised widely	6	50.0
	diversity: too many white women on the board	4	33.3
	diversity: too many white men on the board	5	41.7
	diversity: lack of diversity creates unconscious bias	5	41.7



At the same time, the code 'challenges : diversity : too many white people on the board' (mentioned by nine participants) consisted of two distinct points so was split to become 'challenges : diversity : too many white women on the board' (now mentioned by four participants) and 'challenges : diversity : too many white men on the board' (now mentioned by five participants).

Using quotes

Qualitative data should feature prominently throughout your report, in particular direct quotes from research participants. Always keep your reader in mind and ensure that quotes speak directly to questions under consideration. Ask yourself 'Is this material interesting or important?' If the material is 'interesting' rather than 'important', consider cutting quotes as excessive qualitative data will add to your word count and distract the reader from your main arguments. Do not present a long list of quotes in a random order ('one participant said this and one participant said this...') but instead refer back to your coding framework and develop a narrative from the overarching themes. Use quotes to demonstrate your arguments and, where required, shorten quotes

and insert an ellipsis [...] to mark the deletion of words. Lastly, double-check that all direct quotes ensure the anonymity of research participants (if this was promised when participants gave consent). Anonymity might require more than the removal of names or job titles as some people use unique phrases individual to them or discuss experiences that might reveal their identity.

Absences in your data

Once you have reviewed the data and developed a coding framework, it is no longer necessary to follow grounded theory or approach your data with an open mind. At this stage of analysis, it is now beneficial to consider the findings of past studies or themes from literature reviews as these will help you think about and identify what is absent in the data. Ask yourself, 'What might you have expected this analysis to uncover that is not there?' As qualitative research involves smaller samples of participants, it is also vital to consider who (if anyone) is absent from this work. For example, the decision to host focus groups outside of core work hours might make it impossible for staff with caring responsibilities to participate. Too often those working with qualitative data overlook absences in their work as they fear it might jeopardise its rigour. However, critical reflection is an important stage of analysis that can reveal a great deal about your research questions.

This Research and Data Briefing focuses on one approach to qualitative analysis, which can be adjusted to fit the size and scope of your project. However, other approaches exist, such as [word clouds](#), which use word frequencies to present a visual snapshot of the data, and [narrative presentation](#), which follow the impact of a policy or initiative on an individual's life and are commonly used in case studies. Although the rigour of other approaches varies, the most appropriate analysis will depend on the specifics of your project and the research questions you wish to answer.

5. Going further – other uses of qualitative data analysis

This final section explores other ways to use the information gathered in qualitative research. For practitioners working on a small-scale project, it likely exceeds your requirements but it is helpful to know what else is possible beyond reporting frequencies, percentages and direct quotes.

A well-designed coding framework, which accurately presents information from the qualitative data, offers a number of potential uses. A coding framework is a baseline, a snapshot of a situation at one point in time, which practitioners can use to benchmark against future work in this area. For example, your university wanted to monitor how students who follow a religion or belief feel about inclusion on campus. The concept of 'inclusion' is tricky to measure quantitatively so the university organised three focus groups to gather students' views. Following the focus groups, practitioners undertook qualitative analysis and developed a rigorous coding framework. The university decided to run the three focus groups again the following year and use the previous coding framework to assess whether students' perceptions and experiences of inclusion were more positive, negative or had stayed the same.

This example demonstrates how qualitative data analysis can empower practitioners to benchmark less tangible or 'soft' outcomes and demonstrate change over time. If the university introduced an intervention between the first and second round of focus groups, such as a network for students who follow a religion or belief, and involved the same participants, then this method would also monitor and evaluate impact.

Lastly, findings from qualitative data analysis should not exist in isolation but instead inform other qualitative, quantitative and mixed methods projects in your institution. For example, why not use findings from focus groups or one-to-one interviews to inform quantitative questions included in staff and student surveys? Research is most effective when it brings together learning from a variety of methods and gives practitioners the ability to answer research questions that go beyond asking 'How many?' but also ask 'Why?'.

6. Conclusion

As a practitioner working in a university or college, the successful execution of a small- to medium-scale research project relies on much more than access to the appropriate tools and methodological know-how. Practitioners must also juggle competing commitments, tight timeframes and pressure from senior management to present ‘headline’ findings that demonstrate something meaningful for the institution.

This Research and Data Briefing presents an introduction to analysing qualitative data against these constraints, with additional guidance and signposting to other resources that highlight the benefits of using qualitative data, how to gather qualitative data and its potential uses beyond those outlined in this briefing.

Analysis of qualitative data comes with few unbreakable rules and the guidance in this briefing presents one way to extract rigorous findings from qualitative data. The most appropriate approach will always depend on the scope and scale of your individual project. However, whatever the focus of your study, this briefing highlights the value in looking beyond quantitative data and finding ways to gather and analyse data that captures the feelings, perceptions and lived experiences of students and staff within your institution.



Contact us

+44 (0) 3300 416201

enquiries@advance-he.ac.uk

www.advance-he.ac.uk

   @AdvanceHE

© 2018 Advance HE. All rights reserved.

The views expressed in this publication are those of the author and not necessarily those of Advance HE. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any storage and retrieval system without the written permission of the copyright owner. Such permission will normally be granted for non-commercial, educational purposes provided that due acknowledgement is given.

To request copies of this report in large print or in a different format, please contact the Marketing and Communications Team at Advance HE:
+44 (0) 3300 416201 or publications@advance-he.ac.uk

Advance HE is a company limited by guarantee registered in England and Wales no. 04931031. Registered as a charity in England and Wales no. 1101607. Registered as a charity in Scotland no. SC043946. Advance HE words and logo should not be used without our permission. VAT registered no. GB 152 1219 50.