

# Preface

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This book provides a detailed framework for carrying out qualitative and mixed methods research, including preparing and doing qualitative and mixed methods data analysis using Dedoose. The reader will be able to integrate qualitative and mixed methods research design with the many features of Dedoose, while extending their skills in qualitative and mixed methods research.

Research methods and the types of data we use today are continually evolving. Dedoose's collaborative, platform-independent, and accessible technologies continue to develop in response to the changing needs of researchers and research teams. Those mastering this book will be prepared for future cloud-based methodological and technological advances.

The authors represent the leadership team of the Institute for Mixed Methods Research ([www.immrglobal.org](http://www.immrglobal.org)), where the vision includes leading in the improvement and expansion of qualitative and mixed methods research and evaluation practice, ultimately developing new ways of designing, conducting, and communicating high-quality social science research.

This book is about an emerging paradigm of technology use in mixed methods data management and analysis. The use of cloud-based tools is a growing area. Dedoose was built by researchers for researchers, and it continues to advance cutting-edge approaches to analysis. Readers of this book will advance their skills in qualitative and mixed methods analysis and reporting and learn how Dedoose can provide them with tools that promote success.

This book is provided as a teaching resource for graduate-level research courses in the social sciences. It focuses on advanced analysis with qualitative and mixed methods research. It is designed to help the readers develop their thinking about their own research and offer insight into the research design and analysis process. Activities are also presented in a few chapters to help the readers master difficult concepts.

This brings us to our mascot, Bruce, the Dedoose Moose.

Throughout the book, Bruce's Tips highlight best practices for the reader from both a methodological and a technological use point of view.

Bruce joined the Dedoose team a few years back during a hike in the forest. Bruce quickly won over the research team with his perceptive insights into meaning-making. When asked his views on human



social problems, Bruce just gave a happy moose smile and asked, “How much grass can a moose munch if a moose could munch grass?” Well, we are still reflecting on this, so for now, Bruce is patiently waiting for our answer.

Since Bruce joined the Dedoose team, he has had plenty of time to find his way through the application. He will be sharing his tips with you throughout this text to help you use Dedoose in the best way possible.

Visit <https://www.dedoose.com/> and <https://www.immrglobal.org/> for additional resources, including videos, user guides, FAQs, articles, case studies, and more to help you use Dedoose for your research.

Since publishing the first edition of this book, we've been deeply enriched by conversations with our graduate students and colleagues whose thoughtful feedback has shaped this revised and expanded text. Their insights have guided us to restructure the book, beginning with the foundations of qualitative and mixed methods research design before navigating the technological landscape that supports it. This restructuring reflects our continually growing understanding that research excellence emerges from the dynamic interplay between methodological meticulousness and technological fluency, neither exists in isolation in contemporary research practice.

Our graduate students consistently emphasize the need for early and repeated exposure to research technologies throughout their methodological training. Yet many in academia still hesitate to fully acknowledge how digital tools have become inseparable from today's research workflows. Both methodological approaches and technological capabilities continue to evolve in tandem, each influencing and transforming the other in ways that reshape what is possible in qualitative inquiry.

Researchers approach this digital-methodological intersection from vastly different starting points. Some arrive with sophisticated digital literacy, while others face a steeper learning curve. The initial challenge often lies not in mastering software mechanics, but in recognizing how these tools can meaningfully enhance your specific research goals. As research has shown, successful adoption of digital tools depends largely on perceiving their relevance to your work and that technological solutions must address genuine methodological needs (Salmona & Kaczynski, 2016).

We offer this book as a contribution to this important conversation, supporting you as you navigate today's technological landscape and develop a personalized digital workflow that advances your research objectives. Our aim is to empower you to make informed choices about methodological-technological integration that will ultimately enhance the depth, validity, and impact of your qualitative and mixed methods research.

## 1.1 Overview of the Book

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This book offers a comprehensive exploration of qualitative data analysis using Dedoose, bridging methodological theory with practical application. In the following pages, you'll find a roadmap of the content, which progresses from foundational concepts to advanced analytical techniques, all designed to enhance your research capabilities regardless of your experience level. Each chapter builds upon the previous one, creating a scaffolded learning experience that addresses the diverse needs of graduate students, faculty members, professional researchers, and program evaluators alike. The overview provides a birds-eye perspective of the journey ahead, helping you navigate directly to the sections most relevant to your current research challenges or interests, whether you're seeking to master the basics of coding, explore mixed methods approaches, or leverage Dedoose's visualization tools to communicate your findings more effectively.

### 1.1.1 Who Is This Book For?

This book serves as a comprehensive resource for a diverse audience engaged in qualitative and mixed methods research:

- **Graduate students** will find accessible entry points into qualitative data analysis software, with clear explanations that demystify both methodological concepts and technical procedures. The step-by-step guides and visual examples provide the scaffolding needed to incorporate sophisticated analysis techniques into thesis and dissertation work.
- **Faculty members** can leverage this text as both a teaching tool and a reference for their own research endeavors. The book offers pedagogical strategies for introducing students to qualitative analysis software while also presenting advanced techniques that can enhance faculty research projects and publications.
- **Researchers** across academic, government, and private sectors will appreciate the efficiency-focused approaches that streamline analysis processes without sacrificing analytical depth. The book will provide insight across multiple disciplines, making the content relevant to researchers regardless of field.
- **Program evaluators** will benefit from specific guidance on using Dedoose to manage complex evaluation data, track outcomes, and generate compelling reports for stakeholders. The mixed methods emphasis is intended to align with contemporary approaches to comprehensive program assessment.

Whether you're a novice researcher taking your first steps into qualitative analysis or an experienced investigator looking to enhance your methodological toolkit, this second edition provides both foundational knowledge and advanced strategies to elevate your research practice through effective use of Dedoose.

### 1.1.2 What Can You Expect From This Book?

In this second edition, readers can expect a deeper exploration of qualitative analysis with Dedoose, informed by rich insights that have emerged from extensive engagement with participants across diverse research contexts.

This edition includes refined methodological approaches based on feedback from the research community, offering new strategies for handling mixed methods data that balance analytical credibility with interpretive flexibility. We review and discuss enhanced visualization techniques that transform abstract qualitative findings into compelling visual narratives, making your insights more accessible to diverse audiences. In addition, we discuss practical solutions to common analytical challenges as identified through workshops and user consultations, with step-by-step guidance for navigating methodological roadblocks. This text also presents advanced coding strategies that move beyond basic categorization to capture the subtle interplay between themes, contexts, and participant experiences.

Throughout this edition, we have prioritized not just the technical aspects of using Dedoose but the interpretive insights that emerge when researchers engage deeply with their data through thoughtful application of the software's capabilities.

### 1.1.3 About This Book

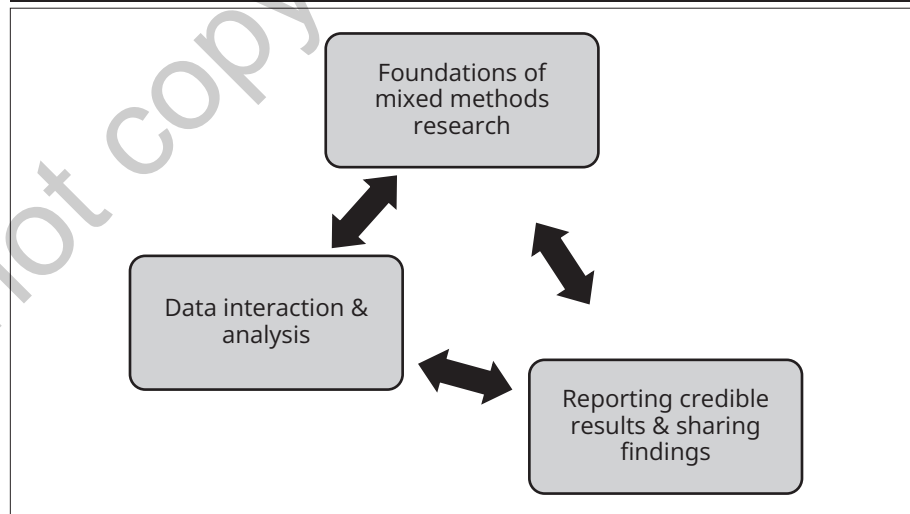
Conducting social science research and program evaluations is about solving problems. Whatever the focus of the work, challenges may be best solved by taking particular perspectives that dictate the methods to be employed. Design issues to be considered include the target population, the data to be gathered, how one might interact with and transform these data, what analyses are to be conducted, and how best to reach the intended audience.

Deciding to employ a particular methodological approach must be guided by the central research question(s). This central point of a study is also referred to as the focus of the study, and the researcher must determine what types of data will best support an inquiry into the central point. Will the research goal(s) be best served with qualitative or quantitative data or both? Once the data are gathered, the researcher must consider what strategies to use to analyze these data: for example, exclusively qualitative or quantitative or comingled and analyzed from a mixed methods perspective. When considering a mixed methods approach, the researcher must keep in mind that this mixing can take place in different ways at different stages of a project. Finally, in what form will the researcher prepare the study findings to assure credibility and utility for the target audience(s)?

This book is structured into three parts, each addressing a key overarching theme in qualitative and mixed methods research using technology. Part I, Foundations of Research, discusses the foundational principles of research, including qualitative and quantitative research and challenges for mixing, framing the purpose and focus of a study, and successfully adopting digital tools with an introduction to Dedoose. Part II, Data Interaction and Analysis, discusses collaboration and describes a more in-depth look at Dedoose, including data transformation and integration and advanced tools in Dedoose. Part III, Reporting Credible Results and Sharing Findings, discusses challenges and strategies for reporting meaningful findings and sharing data with a larger audience. Within these three themes, key areas are covered, such as developing a qualitative or mixed methods design; implementation of the qualitative or mixed methods design; approaches to sampling, data gathering, synthesis, and analysis; and sharing your findings.

As illustrated in Figure 1.1, qualitative and mixed methods data analysis using a data application such as Dedoose requires an interaction with all three parts of this book. The goal of this book is to provide connections between the research process and computer-aided data management, analysis, and visualization using Dedoose—specifically, proven analytic strategies for qualitative and mixed methods work. The book is written for a broad audience of academics, teachers, graduate students, evaluators, doctoral students, program administrators, and investigators in a wide range of disciplines planning to use Dedoose.

Figure 1.1 Qualitative and Mixed Methods Data Analysis Using Dedoose



Throughout this book, the importance of engaging in well-considered research design-thinking to complement researcher technological skill-building is emphasized. To begin this broader discussion, essential steps in thinking through a research design are highlighted. That is, a study typically begins with a core topic often expressed with key words. Next, the social problem is framed to demonstrate the importance of the proposed research. From there, research design-thinking wrestles with the methodological complexity of a central focus and key research questions. A well-known remark attributed to Albert Einstein highlights the importance of this upfront thinking:

If I had an hour to solve a problem and my life depended on the solution, I would spend the first 55 minutes determining the proper question to ask, for once I know the proper question, I could solve the problem in less than five minutes.

This book also introduces the necessary methodological skills to use Dedoose properly as a social science researcher. These skills and empirical practices promote sound, high-quality mixed methods work. In the coming chapters, look for examples of how Dedoose functionality and features facilitate the “mixing” that is purported to enhance the quality and complexity of your mixed methods study/work/results. Accordingly, this book provides some review of research foundations, design, and practical examples to establish the clear building blocks on why and how to use Dedoose effectively.

## 1.2 What Is Dedoose?

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Dedoose is a web-based platform designed specifically for qualitative and mixed methods researchers who need sophisticated analytical capabilities. While accessible to novice researchers, it provides robust features for coding, analyzing, and visualizing relationships between qualitative data alone or with quantitative variables. The platform operates in the cloud, eliminating installation barriers and hardware constraints that often limit desktop-based alternatives.

For researchers familiar with basic technology but new to qualitative analysis software, Dedoose offers a compelling advantage through its cloud-based architecture. This approach enables real-time collaboration among research team members, regardless of geographic location, while simultaneously providing secure data storage with automatic backups. The platform’s integrated environment allows researchers to seamlessly transition between qualitative coding and quantitative analysis, which is a crucial feature for mixed methods projects where interconnections between narrative data and numerical metrics must be carefully explored. Unlike conventional research software that often separates these analytical streams, Dedoose’s design reflects an understanding that contemporary research frequently requires both depth and breadth of analytical approach.

### 1.2.1 What Is Dedoose?

This book is about Dedoose, so what is Dedoose? Dedoose is a web-based application that allows you to organize and analyze research data, no matter what form those data take. Whether your research data are qualitative (text, audio, images, or video), quantitative (spreadsheets, surveys, test scores, ratings, or demographics), or a mixture of both, Dedoose's design is flexible enough for you and your team to manage these data and apply whatever methodologies you choose. Dedoose supports both traditional qualitative approaches and mixed methods approaches to data interaction and analysis in a secure, collaborative environment. As an application, Dedoose can assist you with your data analysis—however, like all qualitative and mixed methods data applications, it will not do the analysis for you.

*The researcher drives the analysis process, not the data application.*

Dedoose is a web-based application that is built as a relational database. You can connect your data by using codes, code weights, descriptors, and memos. This allows you to manage your project and build and track a web of connections between various aspects of your database.

A relational database allows data to live in natural forms within an application. An example is text imported as .docx or .txt files. The Dedoose relational database also supports spreadsheets as .xls or .csv files, video as .mp4 files, audio as .mp3 files, and images as .jpg files. The key benefit to allowing different forms of data to live in natural formats within a single application is maximized efficiency. For example, when you paste an image into a document, the result is a single file with two different forms of data—image and text. Your use of this file is limited by what you can do with each form of data. However, through a set of relationships, these different types of data are connected in Dedoose as a relational database so that all the information can be efficiently used for visualization and analysis.

Dedoose can best be described as a qualitative and mixed methods data application or digital tool. Digital tools for qualitative data analysis are usually referred to using the acronyms QDAS (qualitative data analysis software) and CAQDAS (computer-assisted qualitative data analysis software), which have been in common use for many years (Gilbert et al., 2014; Richards, 2015; Silver & Lewins, 2014). This book discusses broadening the use of technological tools by welcoming more mixed methods data handling than QDAS or CAQDAS has traditionally represented. Dedoose is different than a QDAS tool, as Dedoose is not a software; it is a cloud-based data application or digital tool.

Digital tools such as Dedoose, which are emerging as new cloud-based applications for data analysis, support the adoption of strategies that promote quality technological integration and improved mixed methods practices by exploring how researchers, educators, and evaluators adopt advances in technology. Such cloud-based digital tools have the ability to not only manage

your data but also analyze it. Examples include Google Sheets, SurveyMonkey, and Dedoose. Given ongoing technological advances, ongoing researcher skill-building is encouraged. Furthermore, teachers and trainers must stimulate students to think outside the box when adopting new features in any digital tools.

## 1.2.2 Using Cloud Technology to Support Mixed Methods Research

Cloud-based services and tools such as Dropbox, Google Drive, Google Hangouts, SurveyMonkey, Qualtrics, WhatsApp, and Viber are now widely adopted and are making the online sharing of resources, gathering of data, manipulation of documents and other information, and communication far more efficient and accessible. Many of these listed apps are commonly used by researchers today. Over the next few years, there will continue to be version updates full of new functions and new apps providing functionality beyond what exists today. Consider what steps you might take to prepare yourselves for the future. What does the changing app environment mean for you and your research? Does it make a difference if you are working alone or working in a team?

While there is a rich history in the literature on technology adoption, very little of this work has focused systematically on how end users choose to adopt and then make use of technology when conducting social science research. From a general perspective, there are widely held views that individuals show varying levels of predisposition to adopt technology (Crook, 1994; Rogers, 1962; Schiffman, 1991). However, where serious concern is raised about quality and methodological rigor, as in academic work, researchers must be similarly concerned about whether the use of any technology is appropriate. Keeping in mind the barriers to technology adoption that are discussed later and when and how technology is brought into the investigative process, work must include salient reflection on the nature of the question being addressed, the nature of the data, and the technological expertise of those responsible for “driving” the process where technology is in play.

For the anthropologist studying the use of technology in human cultural development, the notion of working in the cloud opens boundless possibilities for sharing and connectivity. The shared work setting also portrays an ongoing struggle for researchers as technologies advance. In many respects, getting one type of computer to talk to a different type continues to be challenging. Researchers require an intuitive work environment that transcends proprietary products, equipment, and communication platforms. A cloud-based work environment responds effectively to this problem. In particular, finding the best way for qualitative and quantitative data to interact in a mixed methods design is increasingly of vital importance. Technology continues to rapidly evolve in response to the problem of great inefficiencies in research data management and integration.

### 1.2.3 Successful Adoption of Digital Tools

The dramatic growth in the use of digital tools in the research design process is changing how researchers and evaluators perform their analysis. Researchers are progressively expanding the adoption of digital tools in the gathering, management, analysis, interpretation, and presentation of data. This increasing adoption of technology has been cited as a major contribution to greater acceptance and credibility of qualitative research (Bazeley, 2013; Davidson & di Gregorio, 2012; Richards, 2015).

The use of digital tools during analysis involves the researcher letting go and immersing themselves into the analytic process through the tool. At this point, the tool becomes a gateway into what Schram (2006) refers to as the inductive and deductive ebb and flow of inquiry. To the casual observer, qualitative and mixed methods research may look easy from the outside when a single paradigm is being used. In practice, though, the complexity of methods and combinations of theoretical orientations requires a high level of understanding to produce robust research with commensurate quality, not just for researchers uncomfortable with technology. The researcher begins with complicated data and then applies techniques that result in making the data even more complicated. A key, potential advantage of any digital tool is that it can easily support the researcher's efforts to pursue and interpret new paths of inquiry. This, however, is dependent on the researcher remaining in control of the analytic process.

Although digital tools may appear to make the research process linear and structured, they may actually have the opposite effect. For example, using memos as bookmarks to help capture the researcher's thoughts involving interpretive investigation can help document the ebb and flow of the research inquiry. When the time arises to pursue those paths that were written and set aside, the task may be daunting due to time constraints or the growing complexity of data management. Digital tools, however, facilitate the researcher pursuing these paths by allowing previous work to be saved swiftly and securely and to be easily retrieved. The researcher is able to flow and shift between lines of inquiry and revisit the data instantly using the digital tool. This nimble functionality provides the researcher with the option to start over at any point, exploring new paths of interpretation without the fear of losing previous work.

#### 1.2.3.1 Trusting a Digital Tool

Numerous advantages to using digital tools have been discussed in the literature, such as data management, increased flexibility, more transparent data analysis, systemized analysis procedures, and rigorous documentation of a visible audit trail (Gibbs et al., 2002; Patton, 2015; Salmona & Kaczynski, 2016; St. John & Johnson, 2000). When using a digital tool, there is a wide range of commands that can be easily employed, often without consciously examining each

step. The researcher's thoughts are commonly centered on the main task of writing. In the same way, the researcher is critically engaged in analysis that combines several complex skills. Proficiency in using any tool allows the analysis process to progress with minimal intellectual qualms and emotional apprehensions related to the intrusion of technology. In this sense, the researcher trusts that the tool is doing what it is intended to do.

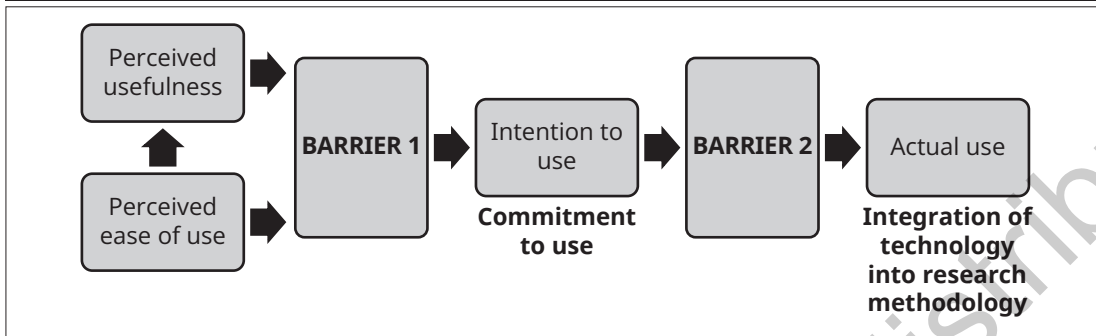
The interplay of complex analysis processes when the researcher engages with digital tools is, as yet, not fully understood. Previously, concern existed that the integration of technology into traditional analysis had the potential to threaten the distinctive nature of mixed methods and qualitative research (Gibbs et al., 2002; Welsh, 2002). Presently, as the researcher explores multiple paths of inquiry using digital tools, substantial benefits are accepted. Digital tools offer the researcher a stable platform to better understand complexity by creating a manageable and flexible working environment that enhances immersion and grounding in the data. As innovative analysis techniques evolve from technology-based practice, the researcher may discover that the digital tool is working in ways that have not yet been considered. As a result, researchers and evaluators must consider and contend with inevitable changes to traditional methodologies and practices. The question before you is, "How can you harness and regulate the use of digital tools in analysis and best position yourself to manage the challenges of design and methodological changes?" It is hoped that this book will help you answer this question.

### 1.2.3.2 Building Successful Skills

Now that you have considered the growing role of technology in research, let's talk about how you can be more successful in using technology. In our earlier work (Salmona & Kaczynski, 2016), we identified two barriers to successful adoption of technology in data analysis that apply to any researcher who is directly interacting with their data, not just those researchers unfamiliar with technology. The following discussion provides a brief overview of the first barrier and then expands into a discussion about the second barrier as researchers and evaluators become clearer about their own approach and methodological thinking.

Using an analytic lens framed by elements of the technology acceptance model (TAM) theory (Davis, 1986, 1989), Salmona and Kaczynski (2016) describe the barriers users often face when deciding to adopt and appropriately make use of technology (see Figure 1.2). These barriers are (a) perceiving the technology as easy to learn and useful and (b) methodological transparency, where the researcher can conceptualize the research and understands that the technology is simply a tool to assist in the research. When adopting technology to appropriately make use of technology in research, it is very important for the potential user to thoroughly consider the barriers commonly faced during this decision-making process.

Figure 1.2 Barriers to Successful Technology Adoption



Source: Salmona and Kaczynski (2016).

Key issues regarding the use of technology and better understanding include perceived transparency (Gilbert, 2000; Janz, 2015; Moravcsik, 2014; Wickham & Woods, 2005) and methodological rigor (Barbour, 2001; Blismas & Dainty, 2003; Coffey et al., 1996). Viewing the adoption process through these two barriers provides a valuable framework for individuals to use when considering the adoption of technology for qualitative or mixed methods research. Clearly, with a deeper understanding of your own characteristics and perceptions of technology and those of anyone else with whom you may be working, you will be able to make wise decisions about any tools you bring into your work and successfully use these digital tools.

### 1.2.3.3 Strategies for Successful Adoption of Dedoose

Before moving ahead, find a comfy chair and pause to reflect on where you fit into this discussion. Are you an innovator, early adopter, majority user, or, perhaps, a laggard (Rogers, 2003)? The laggards find technology disruptive and confusing, and they think about how it might interfere with their research design-thinking, becoming isolated and disengaged from technological adoption. Their decision is clear; they are not going to adopt technology in their research. The other extreme of innovators and early adopters are strongly committed to the benefits of using technology, and creativity helps them engage in their research design-thinking. The middle ground between these two extremes is where the majority of users sit. This group of researchers has the greatest potential to successfully adopt a digital tool without giving up methodological control of their inquiry, as they neither outright reject adoption nor enthusiastically leap to adoption without much thought about potential costs and benefits.

How secure, comfortable, optimistic, and “innovative” do you feel when trying a new digital tool for research? To be successful with a new tool, you need to think about the two barriers discussed in the previous section and consider several questions:

- Is the digital tool easy to use, and do you think it is useful?
- How are you thinking about your methodology?
- Are you confident about your methodological skills?
- Do you think you know what to do, if the work does not use a digital tool?
- What steps are you taking to integrate your methodological awareness with your developing technical skills?

It is well known that qualitative data analysis software has been used for decades in both research and educational settings. Indeed, di Gregorio and Davidson (2008) suggest that the use of such software applications will become a standard in qualitative research. Yet researchers continue to discuss methodological concerns about the adoption and use of such technology.

Once you have made the decision about whether to adopt digital tools, it is time to think about the first barrier: Is the package easy to learn and use? Shop around and test-drive the wide range of available applications and software programs. Most packages will offer you a free trial. Take advantage of this opportunity by creating a test project for playing with a number of different packages. Are you comfortable with the technological functions, and can you do what you want to do? Is the tool convenient and accessible? What is the learning curve's trajectory? How long will it take you to master the software so that you can use it successfully in your work? Reflection can help users capitalize on the benefits of technology while confronting and overcoming barriers to adoption (di Gregorio, 2010; Moylan et al., 2015).

The next step is to think about the second barrier of methodological transparency. Consider the methodological decisions that you have made supporting the research design of your study. Remember that you are the investigator and it is your job to determine the direction of inquiry and drive the research process. Do you have a clearly articulated and documented approach? Have you justified what you are doing and the purpose of your mixed methods research? Learn, know, embrace, and trust your methodological framework before you begin using digital tools.

#### EXERCISE

Have a conversation with a colleague, fellow student, or friend about your research. Share how you are using tools for your research at the same time as you are creating your research design. Are your aims clear? Does your audience understand you?

From our research, we now know that if you think a digital tool is easy to use and you perceive the tool to be useful, you are more likely to use it successfully (Salmona & Kaczynski, 2016). Once you have negotiated this first barrier, you are on your way to being successful with your chosen digital tool. To address the second barrier, strive to be methodologically confident and aware throughout your study. That is to say, allow your research focus to define your path of inquiry, not the technological functions of the tool.

## 1.2.4 Getting Started With Dedoose

### 1.2.4.1 Creating an Account in Dedoose

It is easy to sign up for an account at Dedoose. Just follow these steps:

1. Click on the red Sign Up button at the top of any page of Dedoose (www.dedoose.com).
2. Fill in the two required fields on the form (email address and your desired username).
3. There are optional fields for promo codes, referrals, and comments.
4. When you have completed the form, click Submit.

Once signed up to Dedoose, you will immediately receive your temporary password. You can then log in and create a permanent password by going to the *Account Space*. While you are there, have a look around the billing area. You will also receive a confirmation email with additional helpful information.

To log into Dedoose, do the following:

1. Click the Log In tab in the upper right corner of the Dedoose home page.
2. Enter your username and password.
3. If you want to avoid having to reenter that information, check the Remember Me box in the lower right corner.
4. Click login or hit the hard return key.

Returning users will see the Home Dashboard for the project you most recently visited. To access a different project or to create a new project, click the Projects tab in the Main Menu bar.

### BRUCE'S TIP #1

#### Free Access to Dedoose

Your first month using Dedoose is FREE. At the end of your free 30 days, you will be asked for payment. For current pricing options and to sign up, see the Dedoose website ([www.dedoose.com](http://www.dedoose.com)).

- Change your pricing plan at any time via Dedoose Support at [support@dedoose.com](mailto:support@dedoose.com).
- If you are a student, ask about the student discount.
- For individual accounts, you are only charged for monthly cycles when you log into your account.

#### 1.2.4.2 Creating a Dedoose Project

When you set up an account in Dedoose, you are given a demo project for playing with and exploring features, so you can find those of most value in your work. As a first-time user, you will see your Demo Project in the Home Dashboard when you first log in. Once there, you will see mixed methods data from a study of literacy development. Keep in mind, this demo is specific to your account. Try deleting, editing, or making any other changes to acclimate yourself to the Dedoose workspaces.

The Project Workspace allows users with appropriate access privileges to do the following:

- Create/Add new projects by entering the Project Workspace and clicking the “Create Project” button in the lower right corner.
- Switch the active project—when logging into Dedoose, by default, you will be entering the most recently accessed project. However, note that periodic system maintenance will take you to your first project (most commonly your demo project). If this occurs, simply enter your Project Workspace to load the project you wish to access.
- Work with a newly created project or load any project you have authorized access to.
- Rename, copy, or delete a selected project.

Please note that renaming, copying, and deleting a project can only be done if you are the creator of the project.

### **BRUCE'S TIP #2**

#### **Naming Your Project**

When you name your project, add a description and decide if you need an additional level of security. If you decide to apply the added layer of encryption, be certain to note your password, as Dedoose cannot help you recover it if forgotten.

**NOTE:** Most users do not need this exceptional added level of encryption. In addition, cross-document and cross-excerpt searching are disabled for an encrypted project, as our system has no way of interpreting the encrypted data without the key.

Once you have created your new project, the next time you log in, Dedoose will load that project instead of the Demo project. If you create additional projects, you will go to whichever project you accessed most recently.

#### 1.2.4.3 Saving and Storing a Dedoose Project

Digital tools are recommended to assist in two areas: (1) data management and (2) data analysis. Researchers must think about how they will systematically manage their data during their research. Data management includes developing a clear structure around the data to be gathered for both storage and backup. We recommend having a complete set of raw data stored separately from any digital tool as a backup. No matter how diligently you back up your data, having a complete clean copy stored on multiple media, such as a university server and a DVD or thumb drive secured in a bank vault, can lead to fewer sleepless nights while you are conducting your research.

### **BRUCE'S TIP #3**

#### **Copy Your Project**

Make a copy of a Dedoose project for storage, personal reference, safekeeping, and exploring and experimenting with your data without affecting the original project. It is always good to regularly export a backup of your project and store it on a secure server. Creating a copy of your project can be

beneficial for testing project-wide changes or for taking a snapshot of your analysis progress. Since you are only charged to access the system, not for the number of projects, do not be afraid to take advantage and make copies liberally.

#### **To copy a project**

1. Click the Projects tab.
2. Highlight a project.
3. Click Copy Project.
4. Click Change.
5. Type your username at the top.
6. Click it when it appears.
7. Click Submit twice.

Visit <http://www.dedoose.com/>, the Dedoose Learning Center <http://dedoose.info/learn>, and <http://www.immrglobal.org/> for additional resources, including videos, step-by-step user guides, FAQs, articles, case studies, and more to help you use Dedoose for your research.

#### 1.2.4.4 Choosing Language Options in the Dedoose Interface

##### **Vignette by Joelle Vandermensbrugghe**

Users often contact Dedoose Support to find out how to use Dedoose with other languages.

The Dedoose interface can be used in four languages: Chinese, English, German, and Spanish. These options have been added to Dedoose to make it possible for users to navigate the interface in their own language. Note that if your language is not on that list, you can still use Dedoose. While the Dedoose application interface can be used in four different languages, Dedoose can work with data in most languages.

When you download Dedoose for the first time, it will attempt to find out which language will work best for you by examining language settings on your computer. If your computer language settings are not in English, the interface you downloaded may open in another language. You can easily change this by selecting another language from the dropdown box on the log-in page (see Figure 1.3).

*(Continued)*

Figure 1.3 Log-In Page for Dedoose Showing Language Selection Box



If you are working in different languages and/or with people who use different languages, you might be unsure whether you should change the interface language. Keep in mind the following:

- To get comfortable with Dedoose, choosing the interface language most familiar to you may be the best option.
- You can change language at any time; it has no effect on data in your projects.
- Your language choice has no impact on what others working on the same project can see. They can access the project in the language of their choice.
- If you are working with people using Dedoose in another language, becoming familiar with that version of the Dedoose interface might make communicating about Dedoose easier.

Beyond established tools like Dedoose, AI is reshaping qualitative research workflows. While AI dominates technological discussions, Dedoose focuses on human-driven analysis. The following vignette introduces AI and digital tools.

### 1.2.5 Vignette—AI and Digital Tools by Christina Silver

The rise of generative AI (GenAI) and the capabilities of large language models (LLMs) have sparked heated debate amongst research communities. Early adopters and advocates are excited about the potential, and some foresee a step-change, even a paradigm shift, in how researchers think about and undertake qualitative analysis. Others, many with well-developed and trusted existing pen-and-paper or computer-assisted methods, are sceptical about the potential and/or concerned about the ethics.

Four broad genres of tools harness GenAI capabilities for the purposes of qualitative data analysis:

- **General-purpose AI tools:** These include chatbots like ChatGPT, Claude, Gemini, and so forth, trained on LLMs, and “Deep Research” tools enabling AI systems to autonomously conduct multistep live research on the internet, based on user prompts. In addition, researchers with programming skills can use programming languages like Python for QDA tasks or create custom GPTs.
- **Integrations into established CAQDAS-packages:** Several CAQDAS-packages have integrated GenAI capabilities into their existing suite of tools. At the time of this writing, these included ATLAS.ti, MAXQDA, QualCoder, NVivo, WordStat, and QDA Miner.
- **Online apps harnessing GenAI for QDA:** This is a new genre of online app designed for qualitative data analysis that harnesses GenAI capabilities exclusively. Dozens of such tools have emerged since late 2022, some designed to facilitate the entire qualitative research process (e.g., including AI-assisted data collection via AI bots, as well as AI-assisted analysis and writing), others focused specifically on the analysis phases. Selected examples include the following: AILYZE, CoLoop, Flowres AI, MyRa, Q-insights, Reveal, and Tailwind.
- **Bespoke in-house tools:** Some research organisations and government departments develop their own GenAI tools for aspects of the qualitative research process. These usually operate within closed ecosystems designed to ensure maximum data security and privacy. Access to these tools is restricted to those who work within those organisations.

*(Continued)*

Each GenAI-assisted QDA tool has its own unique characteristics and features informed by its developmental impetus (e.g., disciplinary or sector-based contexts, methodological focus, and practical application). However, broadly, they all harness one or more of the following capabilities:

- **Generate:** the capability of LLMs to create something new. In the context of QDA this might involve generating ideas for research design, interview guides, and appropriate sampling frames, and so forth; generating data, for example, using AI bots to interview humans; and generating “silicone” or “synthetic” data for use in piloting qualitative analysis
- **Convert:** the capability of turning one thing into another, most commonly employed in QDA in the form of speech-to-text capabilities for automated transcription of audio/video files.
- **Summarise:** the capability of condensing text, used to synthesise as a form of data reduction in QDA. AI summaries can be created at several levels—for example, whole datafiles, selected text segments within datafiles, and already coded segments.
- **Converse:** the capability of entering into a dialogue (“chatting”) with qualitative data in sequential conversational interfaces or in comparative grid displays.
- **Label:** the capability of suggesting potential codes from selected text segments or sub-codes for a code, undertaking AI-driven coding, and AI-driven theme identification.

Such capabilities are being used across the qualitative analysis workflow. Some researchers favorably compare the capabilities of GenAI with traditional analysis methods (e.g., Morgan, 2023; Goyanes et al., 2024; Hitch, 2024). Others argue that the new capabilities represent a significant departure from traditional QDA methods, not just a different way of accomplishing established methods, and thus describe GenAI tools as spawning new analytic strategies (e.g., Hayes, 2025; Krähnke et al., 2025; Morgan, 2025; Friese, 2025; Nguyen-Trung & Nguyen 2025).

The use of these tools, however, is not without consequences and challenges. First are ethical implications relating to how LLMs are developed, the environmental and societal consequences of their use, and security risks associated with processing qualitative materials using GenAI. In addition are several methodological implications, including questions about the extent to which LLMs can interpret, how these tools might change the way QDA is

undertaken, and what the use of GenAI for QDA means for research integrity, authorship, and professional legitimacy.

In the fast-moving space, it is important to discuss the implications of new technologies, as there is no one-size-fits-all response. Considering the characteristics of each qualitative or mixed-methods study and the strategies-level analytic needs is what should drive the choice and use of any set of tools. This is more important than ever.

See Chapter 13 for more about Qualitative Analysis and AI: What Does the Future Hold?

## 1.3 Course Adoption

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This section provides guidance for instructors considering the adoption of “Qualitative and Mixed Methods Data Analysis Using Dedoose” for research methods courses. It offers a comprehensive teaching approach with special attention to effective pedagogical strategies. Whether teaching an advanced undergraduate course, a graduate seminar, or a professional development workshop, the materials presented here will help integrate the textbook for adoption in a range of courses in the following subjects: research methods, qualitative methods; advanced qualitative analysis; and seminars in mixed methods research.

The following examples provide a sample course structure, present exercises aligned with specific textbook chapters, and offer additional teaching resources. By implementing these suggestions, instructors can create a learning environment that balances theoretical understanding with practical application, preparing students to conduct leading-edge qualitative and mixed methods research in their respective fields.

### BRUCE'S TIP #4

#### Procrastination Is Not Analysis

It is important for the novice researcher to recognize when they are delaying more advanced analytic thinking by engaging in clerical organizational tasks. Procrastination is not analysis.

### 1.3.1 Course Adoption

Following in Table 1.1 is a sample 14-week course outline presented in table format. This outline can be adapted for semester or quarter systems and modified based on specific instructional needs.

Table 1.1 Sample Course Outline

Week	Topic	Textbook Chapter	Key Activities
1	Introduction to qualitative and mixed methods research	Chapters 2 & 3	Research paradigm reflection paper; discussion of methodological approaches
2	Getting started with Dedoose	Chapter 1	Setting up research projects; interface orientation; account creation; data importing
3	Data preparation and management	Chapter 4	File format preparation; media organization techniques; data import exercises
4	Code development fundamentals	Chapter 5	Developing initial codebooks; inductive vs. deductive approaches; creating code structures
5	Basic coding techniques	Chapter 5	Applying codes to excerpts; code weighting; using memos and annotations
6	Midterm project	Chapters 1–5	Application of skills; preliminary analysis presentations
7	Team-based coding approaches	Chapter 9	Establishing coding protocols; managing code application across teams
8	Teams in Dedoose	Chapter 10	Reliability assessment; managing code drift; consensus-building techniques
9	Descriptor systems	Chapter 6	Creating descriptor sets; linking descriptors to media; using descriptors in analysis
10	Mixed methods integration	Chapter 6	Integrating qualitative and quantitative data; survey data integration; cross-method analysis
11	Visualization tools	Chapter 7	Code application charts; code co-occurrence; descriptor field dimensions
12	Advanced analysis techniques	Chapter 8	Pattern analysis; comparative analysis; theoretical development
13	Reporting and exporting	Chapters 11 & 12	Export formats; creating effective reports; integrating with other software
14	Final project presentations	All chapters	Final project submission; peer feedback; course reflection

### 1.3.2 Teaching a Data Analysis Course Using Dedoose (with exercises)

This section provides guidance for effectively teaching with this textbook, including sample exercises aligned with specific chapters. The following Table 1.2, **Sample Exercises Aligned With Textbook Chapters**, presents where each exercise builds upon skills developed in the previous ones, creating a comprehensive learning experience.

Table 1.2 Sample Exercises Aligned With Textbook Chapters

Exercise	Chapter Alignment	Learning Objective	Key Tasks	Assessment Criteria
<b>Getting started with Dedoose</b>	Chapter 1 & Dedoose Learning Center	Familiarize students with the Dedoose interface and basic functionality	Create account; set up project; import transcripts; review Dedoose Learning Center	Correct project setup; successful data import
<b>Develop a codebook</b>	Chapter 5	Practice developing a structured, hierarchical codebook based on conceptual frameworks	Develop hierarchical codebook (3–5 parent codes, 8–12 child codes); create clear definitions; provide example excerpts; import codebook; write reflection	Logical code hierarchy; clear code definitions; appropriate example excerpts; successful import; thoughtful reflection
<b>Team-based coding and reliability</b>	Chapters 9 & 10	Apply team coding approaches and reliability assessment techniques	Code transcript; exchange with classmate; run reliability analysis; discuss discrepancies; reach consensus; write report on process	Thorough code application; completed reliability analysis; thoughtful discussion of discrepancies; insightful reflection on improving reliability
<b>Mixed methods analysis</b>	Chapter 6	Integrate qualitative coding with quantitative descriptor data	Import and code qualitative data; import survey data as descriptors; create integrated visualizations; write analysis of patterns and relationships	Successful data integration; appropriate visualization creation; insightful pattern analysis; thoughtful discussion of mixed methods benefits

(Continued)

Table 1.2 (Continued)

Exercise	Chapter Alignment	Learning Objective	Key Tasks	Assessment Criteria
<b>Advanced visualization</b>	Chapters 6 & 7	Apply advanced visualization techniques and reporting strategies	Create code co-occurrence matrix; generate advanced visualizations; export findings; write interpretative report	Effective use of advanced visualization techniques; appropriate application of reporting strategies; clear interpretation; compelling presentation
<b>Research project</b>	All chapters	Apply comprehensive Dedoose skills to a complete research project	Select research question; collect dataset; create comprehensive project; prepare research report; present findings	Comprehensive application of textbook concepts; thorough project organization; effective use of Dedoose features; insightful analysis; clear reporting

### Additional Teaching Resources

#### Sample Datasets

Instructors may wish to provide students with the following types of sample datasets:

1. **Interview transcripts:** 5–10 semi-structured interviews on a consistent topic accessible to students across disciplines (e.g., work-life balance experiences, technology adoption)
2. **Focus group transcripts:** 2–3 focus group discussions that complement the interview data
3. **Survey data:** Corresponding survey responses that can be imported as descriptors—for example, the output from an online survey conducted in class
4. **Field notes:** Observational data that can be analyzed alongside other data types
5. **Documents:** Policy documents, media articles, or other text materials relevant to the research topic

## Technology Requirements

For successful course implementation, ensure the following:

1. All students have reliable internet access
2. Dedoose accounts for each student (individual or lab-based)
3. Access to computers that meet Dedoose system requirements
4. Backup options for data storage and sharing

## Collaborative Learning Strategies

Consider these approaches to enhance the learning experience:

1. **Coding circles:** Small groups that practice coding together and discuss both individual and shared group code definitions
2. **Project teams:** Collaborative research teams that simulate real-world research environments
3. **Peer review:** Structured feedback sessions on coding approaches and analysis
4. **Virtual lab hours:** Dedicated times for troubleshooting and advanced feature exploration

The integration of “Qualitative and Mixed Methods Data Analysis Using Dedoose” into research methods curricula offers instructors a structured approach to teaching contemporary qualitative and mixed methods analysis. By following the course outline and implementing the chapter-aligned exercises presented in this section, instructors can provide students with both theoretical knowledge and practical skills in computer-assisted qualitative data analysis.

The second edition of this textbook addresses the growing need for methodologically sound training in qualitative digital analysis tools, particularly in disciplines where mixed methods approaches are becoming increasingly common. As researchers face larger and more complex datasets, the pedagogical framework provided here helps instructors prepare students to effectively manage, analyze, and present qualitative and mixed methods research using Dedoose.

The exercises presented in this section build sequentially from basic orientation to Dedoose toward comprehensive research project implementation, allowing students to develop confidence and competence progressively. By aligning these exercises with specific textbook chapters, instructors can reinforce key concepts while providing hands-on application opportunities.

Successful adoption of this textbook in research methods courses requires thoughtful planning, access to appropriate technology resources, and the creation of a collaborative learning environment. The guidance provided in this section aims to support instructors in developing courses that balance methodological rigor with practical skill development, ultimately preparing students to conduct sophisticated qualitative and mixed methods research in their respective fields.

## 1.4 Dedoose for Literature Review: A Guide for Researchers

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The literature review represents a foundational element of scholarly research that often poses significant challenges for novice researchers. As academic expectations increase for comprehensive, analytical engagement with existing literature, beginning researchers frequently struggle with managing information volume, identifying meaningful patterns across studies, and developing coherent theoretical frameworks from diverse sources. Digital tools offer a structured approach to these challenges, with Dedoose emerging as an accessible option for researchers new to literature analysis. This section examines how Dedoose can support novice researchers through various stages of the literature review process, from initial organization to final synthesis, with particular attention to how the tool facilitates the transition from descriptive summarizing to analytical thinking. Rather than focusing on technical capabilities, this discussion emphasizes how Dedoose aligns with and enhances the intellectual processes inherent in reviewing literature, serving as a supportive framework that helps beginning researchers develop scholarly thinking while maintaining focus on content rather than technology.

### 1.4.1 The Literature Review Challenge for Beginning Researchers

The literature review represents a fundamental component of scholarly research, requiring systematic organization, critical analysis, and thoughtful synthesis of existing knowledge. For novice researchers, the process often presents significant challenges: managing large volumes of articles, identifying meaningful patterns across studies, and developing a coherent theoretical framework from diverse sources. These challenges can overwhelm beginning researchers who are simultaneously developing their understanding of the subject matter and research methodology.

Novice researchers typically encounter several specific obstacles when undertaking literature reviews:

1. **Information overload:** The sheer volume of available literature can be paralyzing, making it difficult to determine which sources are most relevant and how they connect to one another.
2. **Maintaining focus:** Without a structured approach, beginning researchers often struggle to maintain focus on their research questions, getting lost in interesting but tangential material.
3. **Moving beyond summary:** Many novice researchers default to summarizing individual articles sequentially rather than synthesizing across sources to identify patterns, contradictions, and gaps.
4. **Developing analytical depth:** Beginning researchers frequently find it challenging to move from describing what the literature says to critically analyzing how ideas connect, conflict, or evolve across studies.
5. **Managing the physical process:** The practical aspects of organizing notes, maintaining consistent records, and retrieving specific information when needed can become overwhelming without systematic approaches.

This examination focuses on how Dedoose, a qualitative analysis tool, can support novice researchers through the literature review process. Rather than emphasizing technical capabilities, this discussion centers on how the tool aligns with and enhances the intellectual processes inherent in reviewing literature. The emphasis is on Dedoose as a supportive framework that helps beginning researchers develop analytical thinking while maintaining focus on scholarly content rather than technological complexity.

### 1.4.2 The Literature Review Process and Dedoose Support

In Section 1.3, we explored the practical implementation of Dedoose in educational settings and the pedagogical considerations for teaching data analysis courses with integrated exercises. Building upon that course adoption framework, we now turn to a critical application of these foundational skills: conducting a systematic literature review using Dedoose.

The transition from course adoption to literature review represents a natural progression in the research journey. Students who have developed proficiency with Dedoose through structured coursework are now equipped to apply these skills to one of the most demanding yet essential components of scholarly research. The literature review process, when supported by Dedoose's analytical capabilities, transforms from a traditionally overwhelming task into a systematic, transparent, and methodologically rigorous endeavor.

This section presents a comprehensive four-stage framework for conducting literature reviews with Dedoose support. Each stage builds upon the previous one while maintaining the iterative flexibility essential to scholarly inquiry. The systematic approach outlined here uses Dedoose’s organizational and analytical features to enhance both the efficiency and quality of literature review work, providing researchers with a clear roadmap for navigating the complex landscape of scholarly literature.

The four stages of the literature review process are designed to move researchers from initial literature gathering through to synthesis and writing preparation, with Dedoose serving as the technological backbone that supports documentation, analysis, and insight generation throughout the entire process.

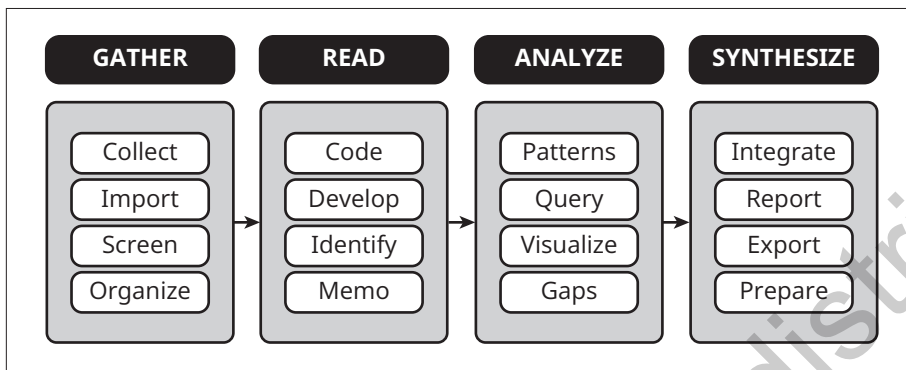
Figure 1.4 illustrates the sequential progression through four distinct stages of the literature review process, with each stage building upon the previous while maintaining support from Dedoose’s analytical capabilities throughout the entire workflow.

The following sections 1.4.2.1–4 provide detailed guidance for implementing each stage of this literature review process, with specific attention to Dedoose features, best practices, and practical strategies for maximizing the effectiveness of your literature review work.

**Table 1.3 Literature Review Process Overview**

Stage	Focus	Key Activities
Stage 1: Initial literature gathering and organization	Document collection and preliminary organization	<ul style="list-style-type: none"> <li>• Document collection and database searching</li> <li>• Import and organization within Dedoose</li> <li>• Initial screening and quality assessment</li> <li>• Preliminary categorization and tagging</li> </ul>
Stage 2: Active reading and conceptual development	Deep engagement and initial coding	<ul style="list-style-type: none"> <li>• Systematic coding of key concepts and themes</li> <li>• Development of comprehensive coding framework</li> <li>• Initial pattern and relationship identification</li> <li>• Memo writing and conceptual development</li> </ul>
Stage 3: Pattern recognition and analysis	Advanced analysis and pattern identification	<ul style="list-style-type: none"> <li>• Advanced querying and cross-document analysis</li> <li>• Pattern mapping and relationship visualization</li> <li>• Gap identification and theoretical development</li> <li>• Code co-occurrence and frequency analysis</li> </ul>
Stage 4: Synthesis and writing preparation	Integration and manuscript preparation	<ul style="list-style-type: none"> <li>• Synthesis of findings and theme integration</li> <li>• Report generation and analytical summaries</li> <li>• Export preparation for manuscript writing</li> <li>• Final documentation and audit trail creation</li> </ul>

Figure 1.4 Four-Stage Literature Review Process Model



#### 1.4.2.1 Stage 1: Initial Literature Gathering and Organization

The literature review process begins with identifying and gathering relevant scholarly works. This initial stage often presents significant challenges for novice researchers.

##### Common Challenges

- Determining appropriate search terms and databases
- Establishing inclusion and exclusion criteria
- Creating a manageable system for organizing numerous articles
- Recording important bibliographic information consistently
- Developing preliminary categories for organizing literature

##### How Dedoose Supports This Stage

1. **Structured import process:** Dedoose encourages novice researchers to think systematically about their literature from the beginning, prompting them to consider how articles relate to their research questions during the import process.
2. **Creating a literature framework:** The platform helps beginning researchers establish a coherent organization system aligned with their research questions. This initial structure provides essential scaffolding that prevents disorganization before it begins.

3. **Comprehensive descriptor system:** Dedoose allows researchers to create custom attributes for each article using descriptors, such as (a) methodological approach (qualitative, quantitative, mixed methods), (b) publication timeframe (tracking how concepts evolve over time), (c) population characteristics (categorizing by research participants or contexts), (d) theoretical orientation (identifying scholarly traditions that inform various studies), and (e) source quality indicators (peer-reviewed, practitioner literature, etc.). This descriptive framework helps novice researchers develop the taxonomic thinking essential for organizing literature meaningfully rather than arbitrarily.
4. **Centralizing article access:** Rather than struggling with scattered PDFs and notes, Dedoose provides a single location for storing and accessing literature. Beginning researchers benefit from uploading documents to a central workspace where they can be systematically examined, reducing cognitive load and helping maintain focus on content rather than file management.

#### 1.4.2.2 Stage 2: Active Reading and Conceptual Development

After organizing the literature, novice researchers must engage actively with each source to extract and organize key information. This stage presents its own set of challenges.

##### Common Challenges

- Maintaining focus on research questions while reading
- Taking consistent, well-organized notes across multiple articles
- Identifying key concepts and arguments within dense academic writing
- Recognizing connections between articles from different authors or fields
- Recording important quotes and examples with proper context

##### How Dedoose Supports This Stage

1. **Guided excerpting process:** Dedoose encourages a structured approach to reading through its excerpting functionality: (a) prompting researchers to identify and select meaningful passages, (b) supporting immediate connection of excerpts to emerging themes, and (c) maintaining source attribution automatically for all selected text.

2. **Concept development through thematic labeling:** By selecting and labeling meaningful excerpts, beginning researchers engage in active reading rather than passive consumption. This process helps (a) develop critical reading skills by identifying key arguments and evidence, (b) create a repository of important quotes organized by concept rather than source, and (c) begin recognizing patterns across articles during the reading process.
3. **Hierarchical theme organization:** The ability to structure themes hierarchically supports novice researchers in (a) developing more sophisticated conceptual frameworks, (b) recognizing relationships between major concepts and sub-themes, and (c) organizing their thinking in ways that will later support writing structure.
4. **Memoing for developing ideas:** The memo function allows researchers to (a) record developing thoughts about patterns they're noticing, (b) document methodological decisions about their literature organization, and (c) capture insights that may later develop into analytical points in their review.

This structured approach to reading and noting supports researchers gradually refine their understanding rather than approaching literature with preconceived categories.

#### 1.4.2.3 Stage 3: Pattern Recognition and Analysis

The most challenging transition for novice researchers involves moving from describing what individual articles say to analyzing patterns, contradictions, and gaps across the literature. This analytical stage presents significant intellectual challenges.

##### Common Challenges

- Seeing beyond individual articles to identify broader patterns
- Recognizing areas of scholarly consensus and disagreement
- Identifying methodological trends or limitations across studies
- Recognizing gaps or underexplored areas in existing research
- Moving from basic categorization to meaningful analysis

##### How Dedoose Supports This Stage

1. **Visualizing concept relationships:** Dedoose provides visual thinking tools that help beginning researchers see connections between ideas

that might not be apparent through traditional notetaking: (a) Code co-occurrence charts help identify how concepts intersect across different studies; (b) concept maps illustrate relationships between major themes and subthemes; and (c) visual representations help recognize conceptual areas that lack sufficient research attention.

2. **Tracking conceptual prevalence:** Visual representations of theme frequency across the literature help novice researchers (a) identify dominant theoretical perspectives within their field, (b) recognize emerging or underexplored areas deserving further attention, and (c) understand how scholarly emphasis has shifted over time.
3. **Cross-attribute analysis:** By examining how themes appear across different types of studies, beginning researchers can develop more sophisticated understandings of (a) how methodological approaches might influence findings on a particular topic, (b) whether theoretical perspectives have evolved over publication timeframes, (c) how research in different contextual settings might yield varying results, and (d) where gaps exist in applying certain methodologies to particular research questions.

These analytical tools help novice researchers think beyond individual articles to develop the integrative thinking essential for meaningful literature reviews. The goal is not simply to document what exists but to identify patterns of meaning across a dataset of the literature relevant for the study.

#### 1.4.2.4 Stage 4: Synthesis and Writing Preparation

The final stage involves synthesizing analyzed material into a coherent literature review that supports the research project. This stage requires translating analytical insights into well-structured writing.

##### Common Challenges

- Organizing content thematically rather than simply listing studies
- Developing a logical structure that highlights relationships between concepts
- Creating a narrative that demonstrates gaps justifying the current research
- Selecting representative examples and quotes from the literature
- Maintaining a consistent argument while addressing diverse perspectives

## How Dedoose Supports This Stage

1. **Thematically organized material:** Dedoose helps novice researchers transition to writing by providing (a) thematically grouped excerpts that can form the basis for literature review sections, (b) hierarchical organization that can translate into heading structures in the document, and (c) clear visualization of relationships that can guide explanatory transitions.
2. **Evidence retrieval:** When developing arguments within the literature review, (a) researchers can easily retrieve specific quotes to support analytical points; (b) connections between concepts are already established through the analysis process; and (c) contrary perspectives are systematically organized for balanced discussion.
3. **Export functions for writing support:** The ability to export organized materials facilitates (a) creation of outline structures based on analytical categories, (b) development of evidence tables summarizing key studies, and (c) organization of reference materials by thematic area rather than alphabetically.

A structured approach to synthesis supports development of conceptually integrated literature reviews rather than annotated bibliographies, helping novice researchers produce more sophisticated scholarly work.

### 1.4.3 Supporting the Development of Scholarly Thinking

For beginning researchers, Dedoose offers more than a technical solution for managing literature, it provides a structured environment that supports the development of scholarly thinking essential for meaningful literature review. By organizing the literature systematically, facilitating identification of patterns across studies, and supporting the visualization of conceptual relationships, Dedoose helps novice researchers develop the analytical skills that characterize scholarly engagement with literature.

The framework outlined here provides novice researchers with practical approaches to literature analysis while facilitating the development of intellectual skills that extend beyond the current project. Through systematic engagement with scholarly literature using this structured approach, beginning researchers can develop confident analytical capabilities that will serve them throughout their scholarly careers.

The integration of Dedoose into literature review methodology represents a meaningful advancement for novice researchers navigating the complex terrain of scholarly analysis. Beyond offering mere technological convenience, this approach provides intellectual scaffolding that supports the development

of analytical thinking essential for academic inquiry. As beginning researchers progress through the literature review process, from initial organization to thematic analysis to final synthesis, the structured framework facilitates progressive development of scholarly competencies that extend beyond the current project. While technological tools cannot substitute for intellectual engagement, they can significantly enhance the developmental journey of novice researchers by reducing cognitive load associated with mechanical tasks and redirecting attention toward analytical processes. For supervisors guiding beginning researchers, Dedoose offers transparency into developing analytical frameworks, facilitating targeted guidance that progressively builds independent scholarly thinking. As research expectations continue to evolve toward greater methodological transparency and analytical sophistication, structured approaches to literature review provide novice researchers with foundational skills that support long-term scholarly development across diverse academic contexts.

## 1.5 Part I: Foundations of Research—Overview

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As we conclude this introductory chapter, you will have gained a clear understanding of what this book aims to accomplish and how it can serve as a valuable resource in your research and/or teaching journey. We have provided an overview of the authors' backgrounds and experiences that informed this work, and introduced you to Dedoose, a powerful qualitative and mixed methods data analysis tool that features throughout this text. For educators considering this book for course adoption, we have outlined how it can complement various research methodology curricula. Finally, the keyboard shortcuts appendix offers practical tools to enhance your efficiency when working with Dedoose.

This introduction serves as the foundation for what follows in Part I: Foundations of Research, a comprehensive exploration of qualitative and mixed methods research approaches, supported by practical guidance on effective data management. As research methodologies continue to evolve in complexity and sophistication, having robust tools and frameworks becomes increasingly essential. The following chapters will equip you with both the conceptual understanding and practical skills needed to navigate this terrain.

Moving Forward in Part I: Foundations of Research, in Chapter 2, we transition from this broad introduction to the specific realm of qualitative data analysis. Here, we guide you through the essential steps of framing your study, a critical preliminary phase that shapes all subsequent decisions. You will learn how to thoughtfully align your theoretical framework with your analytic approach, ensuring conceptual coherence throughout your research process. We then dive into practical strategies for initiating analysis of raw qualitative data, demonstrating how to move from initial observations to meaningful

insights. The chapter explores techniques for building connections and identifying relationships within your data, revealing patterns that might otherwise remain hidden. Finally, we address the common challenge of “analytic rabbit holes,” which are those fascinating but potentially distracting pathways that can derail your research focus, and we offer strategies to maintain productive analytical momentum.

Building on your qualitative analysis skills, Chapter 3 expands into the dynamic field of mixed methods research. We begin by examining the relationship between mixed methods approaches and the philosophical paradigms that inform them, helping you navigate potential tensions and identify productive complementarities. The chapter then discusses various mixed methods analysis strategies, clarifying when and how to implement them effectively in your research design. Finally, we provide practical guidance on preparation for mixed methods analysis, addressing the unique challenges of integrating qualitative and quantitative data streams while maintaining methodological integrity.

Chapter 4 then addresses a fundamental yet often overlooked aspect of successful research: effective data management. We begin with strategies for gathering data across various contexts and modalities, ensuring you capture the information most relevant to your research questions. The chapter then examines how to work with numerical data in qualitative and mixed methods contexts, bridging quantitative and qualitative approaches. We explore the critical role of memos as a specialized form of data that can enhance analytical depth and transparency. Finally, we provide detailed guidance on preparing diverse data types for import into Dedoose, establishing the technical foundation for the analytical processes explored in previous chapters.

As we progress through these foundational Chapters 1 through 4, you will develop both the conceptual understanding and practical skills needed to conduct rigorous, insightful research using contemporary tools and methodologies. Each chapter builds upon the others, creating an integrated approach to research that emphasizes thoughtful design, systematic analysis, and effective data management. Part I thus provides the essential knowledge base for the more advanced applications and specialized topics explored in subsequent sections of this book.

## APPENDIX: KEYBOARD SHORTCUTS

Efficient qualitative data analysis requires not only powerful software but also the ability to navigate and operate that software with speed and precision. This appendix provides a comprehensive guide to keyboard shortcuts available in Dedoose, designed to streamline your workflow and maximize productivity.

Whether you're coding interviews, organizing excerpts, or generating reports, mastering these keyboard shortcuts will significantly reduce the time spent on repetitive tasks and allow you to focus more on analysis and interpretation. From basic navigation to advanced coding functions, these shortcuts represent the hidden power tools of the Dedoose platform.

The following pages outline shortcuts organized by function category, making it easy to find and memorize the combinations most relevant to your specific workflow. Even implementing just a few of these shortcuts into your regular practice can yield substantial time savings over the course of a research project.

Table 1.4 Keyboard Commands in Dedoose

Everywhere	
Tab	Moves focus to next component
Enter	Sends a mouse click to current focused component
Numerical Stepper (tag weight)	
Up/Down Arrow	Increase or decrease value
Document Editor (when editing document text)	
Ctrl z	Undo
Shift + Arrow Up	Highlight starting from cursor, one line up at a time
Shift + Arrow Down	Highlight starting from cursor, one line down at a time
Shift + Arrow Right	Highlight one character to the right of currently highlighted area
Shift + Arrow Left	Highlight one character to the left of currently highlighted area
Ctrl c	Copy highlighted text
Ctrl x	Cut highlighted text
Ctrl v	Paste clipboard
Ctrl z	Undo last change

Ctrl Up Arrow	Select previous excerpt in document while editing
Ctrl Down Arrow	Select previous excerpt in document while editing
Alt Backspace	Delete previous word
Alt Delete	Delete next word
Delete	Delete next character
Insert	Toggle overwrite mode
Backspace	Delete previous character
Enter + Shift	Split paragraph
Enter	Start new paragraph
Tab	Shift item to the right by one tab or adjust list item down by one level
Shift + Tab	Shift item to the left by one tab or adjust list item up by one level
Shift + various	Select multiple lines of text by: Shift + arrow keys / Home / End / PageDown / PageUp
<b>Document Viewer</b>	
Spacebar	Show quick code widget
M	Create memo for selected excerpt or create new excerpt and memo if text is selected
Ctrl + s	Toggle search panel
Ctrl + Right Arrow	Select next media
Ctrl + Left Arrow	Select previous media
Ctrl + Up Arrow	Select previous excerpt
Ctrl + Down Arrow	Select next excerpt
<b>Video / Audio Viewer</b>	
Ctrl + Right Arrow	Select next excerpt
Ctrl + Left Arrow	Select previous excerpt
Ctrl + q	Create excerpt for current region
Ctrl + p	Toggle play/pause
Ctrl + -	Move playhead back 5 seconds
Ctrl + Shift + -	Move playhead back 1 seconds

(Continued)

Table 1.4 (Continued)

Ctrl + Alt + -	Move playhead back 15 seconds
Ctrl + +	Move playhead forward 5 seconds
Ctrl + Shift + +	Move playhead forward 1 seconds
Ctrl + Alt + +	Move playhead forward 15 seconds
Ctrl + 9	Set current position as selection region start
Ctrl + 0	Set current position as selection region end
Video Viewer	
Ctrl + Right Arrow	Select next excerpt
Ctrl + Left Arrow	Select previous excerpt
Ctrl + q	Create excerpt for current region
Ctrl + p	Toggle play/pause
Ctrl + -	Move playhead back 5 seconds
Ctrl + Shift + -	Move playhead back 1 seconds
Ctrl + Alt + -	Move playhead back 15 seconds
Ctrl + +	Move playhead forward 5 seconds
Ctrl + Shift + +	Move playhead forward 1 seconds
Ctrl + Alt + +	Move playhead forward 15 seconds
Ctrl + 9	Set current position as selection region start
Ctrl + 0	Set current position as selection region end

Dedoose Learning Center: <http://dedoose.info/learn> and search for Keyboard Shortcuts.

## Qualitative Data Analysis

Each qualitative study is a unique analytic thought process of inquiry into social interactions in the natural setting. Such inquiry is not intended to produce generalizable findings, rather, illumination and deeper insights that are credible and transferable to other social phenomena (Denzin et al., 2023; Polit & Beck, 2010).

Qualitative and quantitative paradigms are procedurally and philosophically distinct and apart. They represent fundamentally different approaches to knowledge acquisition, standing procedurally and philosophically distinct and apart from one another in their methodological foundations, epistemological assumptions, analytical techniques, and ultimate goals of inquiry.

While quantitative research emphasizes objective measurement, statistical analysis, and generalizable conclusions through structured data collection methods, qualitative research emphasizes contextual understanding, interpretive analysis, and rich descriptive insights through naturalistic inquiry and subjective experience. These paradigms diverge significantly in their underlying philosophical positions regarding the nature of reality, the relationship between researcher and subject, and the very definition of what constitutes credible evidence within scientific and social investigation. Furthermore, the use of terminology for each paradigm reflects these differences. For example, the quantitative constructs of **validity**, **reliability**, and **generalizability** are usually considered inappropriate qualitative terminology, as qualitative inquiry draws on an ambiguous and fluid process of meaning-making. Whereas terms such as **transferability**, **dependability**, **confirmability**, and **trustworthiness** are applied by the researcher to communicate qualitative distinctions (Anfara et al., 2002; Denzin et al., 2023; Kaczynski, Miller, et al., 2014; Patton, 2015). When conducting qualitative analysis, it is essential to remain sensitive to the important distinctions between these procedural methods and philosophical worldviews that embody each paradigm and shape credible findings.

The journey from raw data to meaningful insights represents both the greatest challenge and the most rewarding aspect of qualitative research. This chapter guides you through the essential components of designing, framing, and analyzing a qualitative study, providing practical strategies to navigate the complexities inherent in interpretive

research. Key elements are highlighted, including steps to frame a study, applying a theoretical orientation to the analysis process, data management, meaning-making through relationships built from the data, and strategies to strengthen the credibility of findings.

Begin your study by considering how to properly frame the inquiry using carefully constructed purpose and focus statements. Having a clear purpose and focus will serve as a solid foundation for developing targeted research questions. These steps work in concert to establish boundaries for your investigation while maintaining the flexibility that qualitative inquiry demands. From there, explore the critical relationship between theoretical frameworks and analytical approaches, demonstrating how theory can inform but not prescribe your interpretive process.

The heart of this chapter addresses the systematic analysis of qualitative data, beginning with effective data management practices and progressing through the iterative stages of coding, evidence-building, and relationship identification. Particular attention is given to the visual representation of emerging patterns and the development of comprehensive codebooks that evolve alongside your understanding of the phenomenon under study.

Finally, the chapter confronts pitfalls that can derail even the most promising qualitative analysis, from pursuing misleading lines of inquiry to the overreliance on isolated quotations and fragmented theoretical concepts. The chapter concludes with practical strategies for representing complex, multilayered meanings in your findings, equipping you with the tools to transform rich descriptive data into conceptually robust and meaningful contributions to knowledge.

## 2.1 Framing the Study

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Qualitative data analysis requires a clear understanding of the scope of the study, including the purpose of the inquiry, focus, and numerous design considerations, such as what key questions the study seeks to answer. Data on its own is just information without a context. Analysis provides meaning behind this information woven from the relationships built from an empirical process. In this sense, qualitative analysis begins with a framework that you, the researcher, provide.

Throughout the analysis process, the researcher strives to remain open to the unknown while drawing on multiple meanings from a diverse range of data sources. In addition, qualitative researchers strive to avoid the temptation of pinning down meaning to a single cause or truth (Erickson, 2012). In this regard, the credibility of a qualitative study requires the researcher to adhere to social science empirical practices designed to present verifiable findings by observation or experience rather than speculation or assumptions. For example, while a single observation may appear interesting or important, it remains nothing more than a

single observation. The observation is evidence only when it is part of and linked to broader findings and interpretations (Denzin et al., 2023; Patton, 2015).

Your study, thus, is an empirical frame comprised of essential elements. Each piece of the frame is carefully crafted and aligned to form a solid foundation from which to build upon. Three essential pieces of the frame are the study purpose, focus, and key research questions. Qualitative data analysis relies on these three pieces to precisely fit together, and it is the qualitative researcher's responsibility to ensure that these pieces have been crafted with the highest quality workmanship. The following sub-sections discuss each of these three elements in turn.

### 2.1.1 Purpose Statement

When starting any social science inquiry and before using any digital tools, careful, detailed research design thinking is required. This is a critical step to ensure that your study is successful. Before you inappropriately jump ahead, promoting a solution to the social problem or selecting specific sources of data intended to prove a point, you must reflect on your connection to this topic. You have come to this research topic for a reason. Your role as a social science researcher in this study has a purpose. You likely have an agenda for approaching this problem. What do you hope to achieve? Now is the time to articulate and write down the intentions behind your inquiry, which will include goals, expectations, and rationale. This represents your purpose.

As Patton (2015) explains, "Purpose is the controlling force in research" (p. 248). A well-articulated purpose statement supports each decision regarding a study design. Fieldwork decisions, such as the choice of setting, sample population, data gathering, and analysis, all flow from your research purpose. Different purposes typically view a social problem from unique vantage points, so every study has a unique purpose. Matching a study's design to the purpose of the study is therefore essential in promoting quality and credibility. This upfront reflection promotes sound qualitative practices and helps avoid premature deductive thinking. Remember, building a solid frame helps ensure your study targets the questions you really want to pursue.

The purpose statement is a critical narrative that outlines your identification and discussion of the social problem under investigation, serving as an expanded justification and roadmap for your entire study. Unlike a concise focus statement, the purpose statement provides a comprehensive explanation that helps your audience understand the full scope and significance of your research endeavor.

In this extended narrative, you not only identify what you plan to study but thoroughly explain why this investigation matters, how it addresses gaps in existing knowledge, and what potential benefits might emerge from your findings. The purpose statement contextualizes your research within the broader scholarly conversation, demonstrates its relevance to real-world concerns, and articulates

your unique approach to understanding the phenomenon. For novice researchers, developing this detailed purpose narrative requires careful consideration of multiple elements: the problem's significance; theoretical frameworks that inform your perspective; methodological approaches that align with your goals; and the potential implications of your work. Your purpose statement must effectively communicate these elements to help readers make sense of "what you are up to" in your research journey, creating a logical bridge between the identified problem and your proposed methodology.

Looking at what a purpose statement is not can be very helpful in identifying what it is. A purpose statement is not any of the following:

- A continuation of the social problem discussion
- A literature review
- A description of fieldwork methods
- A hypothesis statement
- A focus or central research question statement
- Reflections on your role as a researcher
- An abstract

You have an agenda behind your choice of topic and the social problem(s) related to this topic. Explain this agenda by writing a well-crafted purpose statement. As you do this, think about the following:

- What is the social problem I want to investigate?
- Where do I want my path of inquiry to take me?
- What do I want to accomplish from my research?

Answering these questions will help you get started on crafting your purpose statement.

Purpose statements are typically about one to two pages in length and follow your identification and discussion of the social problem. This purpose narrative must aid your audience in making sense of and figuring out what you are up to. Your goal is to be transparent by offering some insights into your design-based research thinking. Explain your perspective that is shaping how you define this social problem. You are sharing the underlying agenda of what this study is about. Keywords that you are using to describe this thinking would likely be sprinkled throughout the purpose statement. An important benefit of writing this purpose statement is that it helps you make your study unique and stand apart from a vast body of related social science research.

For researchers, this purpose statement is invaluable as it clarifies your own thinking, establishes credibility with stakeholders, provides a foundation for

methodological decisions, and contextualizes your work within the broader field. By thoroughly developing your purpose statement, you transform what might otherwise be a simple exploration into a justified scholarly contribution that helps your audience understand both what you're doing and why it matters in the larger context of knowledge creation.

### EXERCISE

Write your purpose statement. Have a conversation with a colleague, a fellow student, or a friend about your purpose statement. Is it easy to understand and follow? Have you clearly made an argument about why your research matters? Is the "So what?" factor clearly described?

## 2.1.2 Focus Statement

A focus statement often follows the purpose statement discussion. The focus statement is one or perhaps two sentences that drive to the heart of what the study is about. This step may also be referred to as a central research question or statement (Creswell & Creswell, 2022). In this discussion, the focus is considered a statement rather than a question. Regardless of the terminology, this statement shapes every design decision you will make for your study. As such, it is essential to the overall quality of a study to distill this statement about the study into a single sentence or two that are not changed or revised as the study proceeds. If the focus is changed, the study is changed.

Here are some helpful pointers for writing a strong focus statement in qualitative research:

### Key elements to include

- State your central phenomenon clearly.
- Identify your participants/population.
- Specify the research context or setting
- Use action verbs that reflect qualitative inquiry (explore, understand, describe).
- Keep it concise (typically 1–2 sentences).

### Common pitfalls to avoid

- Being too vague or too broad
- Including quantitative language (measure, test, prove)

- Making predictive statements about findings
- Introducing too many variables or concepts

### Some resources for further reading

Bloomberg, L. D., & Volpe, M. (2019). *Completing your qualitative dissertation: A road map from beginning to end*. Sage.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches*. Sage.

Maxwell, J. A. (2013). *Qualitative research design: An interactive approach*. Sage.

Many universities have writing centers offering open-source online resources which can assist you in writing purpose and focus statements, such as the following:

- Purdue Online Writing Lab (OWL)
- University of North Carolina Writing Center
- Harvard Graduate School of Education Writing Center

When crafting your focus statement, remember that it must align with and flow naturally from your purpose statement, providing a more concentrated articulation of your research intentions.

A well-crafted focus statement serves as the concentrated essence of your qualitative research, distilling your intentions into one to two precise sentences that clearly identify what you're studying, with whom, and in what context. Unlike the more comprehensive purpose statement, the focus statement provides readers with an immediate understanding of your research direction without delving into extensive justification or background. For optimal results, include your central phenomenon, specific participants, and research setting while using appropriate qualitative action verbs. Avoid common pitfalls such as vagueness, quantitative language, or predictive claims. Remember that your focus statement must maintain clear alignment with your broader purpose statement, serving as its concentrated, actionable core.

As you refine your focus statement, try to identify possible methodological barriers and clarify possible challenges you may face. Writing memos is a very

#### EXERCISE

Write your focus statement. Have a conversation with a colleague, a fellow student, or a friend about your purpose statement. Is it easy to understand and follow?

useful technique to compartmentalize your challenges and an effective approach for coming up with systematic responses to these challenges. Refer to Chapter 4 for more on memos.

### 2.1.3 Research Questions

The key research questions in any research are a logical progression from the purpose and focus of the study. Each question shapes how the study will explore, discover, investigate, and/or better understand the social phenomena. It is the intent of analysis to dig through the evidence for answers and insights to these questions. In a dissertation or thesis, it is common to present three questions that build upon each other. Findings, recommendations, and conclusions drawn from the analysis process are intended to answer these questions and hopefully generate new knowledge.

Research questions in qualitative inquiry serve as navigational beacons for your investigation, bridging your study's purpose with its methodological execution. Unlike hypothesis-driven quantitative research, qualitative questions are deliberately open-ended and evolving, typically beginning with “how” or “what” rather than “why.” This phrasing invites rich description and interpretive understanding, creating space for multiple perspectives and contextual nuances that might be missed with more causally oriented inquiries.

The development of research questions is an iterative process where initial questions provide direction but may evolve as you engage more deeply with participants and data. Each question must connect to your theoretical framework while remaining answerable through your proposed methods. This alignment ensures questions are both conceptually relevant and methodologically feasible within your study's constraints.

Effective qualitative research questions balance specificity and openness: focused enough to provide clear direction and sufficiently open to allow for unexpected discoveries. Some studies may benefit from a primary overarching question followed by several sub-questions addressing specific dimensions of the phenomenon, typically limited to five total questions to maintain depth over breadth. The quality of your research ultimately depends not on how many questions you address but on the depth and insight with which you explore them.

Framing your qualitative study through carefully crafted purpose statements, focus statements, and research questions establishes the foundation upon which your entire research project rests. The purpose statement articulates the broader significance and justification of your work, explaining why your inquiry matters within the larger scholarly conversation and to potential stakeholders. The focus statement distills this purpose into a clear, concentrated declaration of your specific research intentions. Research questions then operationalize these intentions into exploratory inquiries that guide your methodological decisions and analytical approach.

## EXERCISE

Draft your primary research question and two to three sub-questions for your study. Exchange these questions with a colleague and ask them to do the following:

1. Identify what phenomenon you appear to be studying
2. Explain what methodology they think would best address these questions
3. Point out any terms that need clarification or questions that seem too broad/narrow

Compare their understanding with your intentions. Revise your questions based on this feedback, paying particular attention to whether they align with your purpose and focus statements while remaining open to the emergent nature of qualitative inquiry.

Together, these three elements create a coherent framework that provides direction without constraining the emergent nature of qualitative research. They work in concert to communicate your research intentions to audiences while helping you maintain focus throughout the research process, including the data analysis phase. A well-framed study demonstrates scholarly care from the outset, establishing clear boundaries for your investigation while acknowledging the complex, interpretive nature of qualitative inquiry. As you move forward into theoretical considerations and analytical procedures, these framing elements will serve as touchstones to ensure your research maintains internal consistency while remaining responsive to unexpected insights that emerge from your engagement with participants and data.

## 2.2 Aligning Theory to the Analytic Approach

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When conducting qualitative analysis within a mixed methods study, the researcher must respect and promote high-quality empirical practices. Achieving quality involves the demonstration of technical procedural competence and the presentation of work that offers a substantial contribution of social importance (Moss et al., 2009). A key component of these practices is analysis—the interpretation of data as credible evidence from which to present findings and meaningful conclusions.

There are a variety of qualitative methods now recognized as credible procedures for conducting qualitative analysis. The choice of a particular approach, however, must appropriately align with the theoretical orientation and overall design of the study (Creswell, 2017; Salmona et al., 2015). Table 2.1 highlights four of the more widely recognized qualitative analysis practices and provides recent references for further readings. Schwandt (2015) provides a brief overview of each of these four methods.

Table 2.1 Widely Recognized Qualitative Analysis Practices

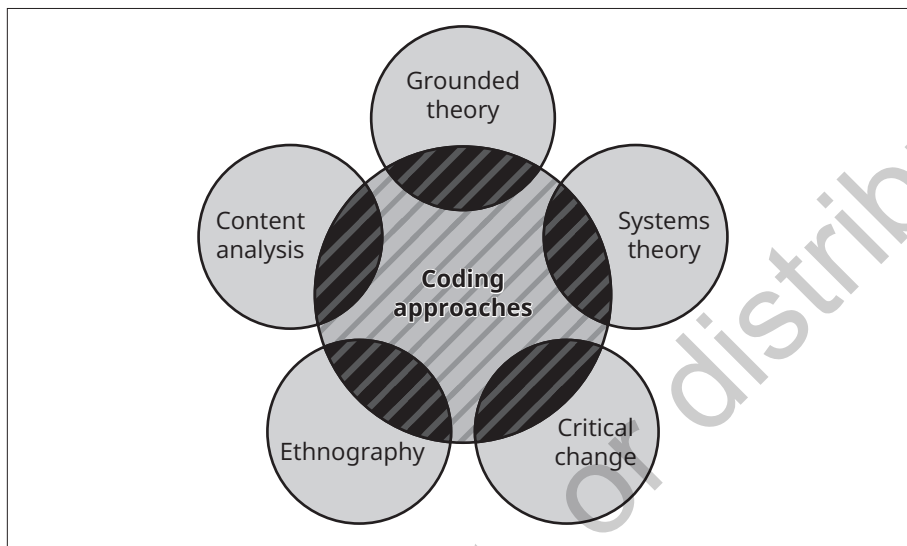
	Further Readings
Discourse analysis	Phillips, N., & Hardy, C. (2002). <i>Discourse analysis: Investigating processes of social construction</i> . Sage. Wooffitt, R. (2014). <i>Conversation analysis and discourse analysis: A comparative and critical introduction</i> . Sage.
Grounded theory	Charmaz, K. (2014). <i>Constructing grounded theory</i> (2nd ed.). Sage. Corbin, J., & Strauss, A. (2015). <i>Basics of qualitative research: Techniques and procedures for developing grounded theory</i> (4th ed.). Sage.
Narrative analysis	Holstein, J. A., & Gubrium, J. F. (Eds.). (2012). <i>Varieties of narrative analysis</i> . Sage.
Thematic analysis	Guest, G., MacQueen, K. M., & Namey, E. E. (2012a). <i>Applied thematic analysis</i> . Sage. Patton, M. Q. (2015). <i>Qualitative research and evaluation methods</i> (4th ed.). Sage.

Patton (2015) describes 16 different qualitative theoretical orientations as a means to demonstrate a small sample representing the diversity of philosophical approaches within the qualitative paradigm. Many of these orientations share common ground on analytic approaches. The following Figure 2.1 demonstrates this overlap among a few more popular orientations.

The common practices of qualitative data analysis involving stages of open coding followed by building code structures are now evident in a wide range of qualitative theoretical orientations. As the researcher engages with the raw data, the analysis process moves from the identification of disconnected points of interest to building increasingly interrelated connections within the data. Many of the more common theoretical orientations may adopt variations of a four-stage process involving elements of (1) open coding, then (2) initial groupings of axial codes, followed by (3) advanced pattern building of axial coding, and finally (4) the identification of patterns and themes of related meanings.

However, it must be noted that grounded theory represents both a valuable framework and contested terrain in qualitative research. While its systematic coding processes offer concrete strategies for managing complex data, applications vary widely, creating tension between methodological purists and adaptability advocates. This reflects broader epistemological debates about how theories emerge and the role of researcher interpretation. Despite controversies among Glaserian, Straussian, and constructivist approaches regarding proceduralization, literature integration, and researcher positionality, core elements of systematic coding and pattern identification continue to inform diverse qualitative analyses. The value of grounded theory principles lies not in rigid procedural adherence but in facilitating systematic data engagement while remaining responsive to emergent insights throughout the research process.

Figure 2.1 Different Theories Sharing Similar Coding Techniques



See Kaczynski et al. (2024, pp. 83–94) for five steps to building a path of evidence through the data.

The following subsections of this chapter discuss (a) getting started with the analysis of raw data, (b) building connections and finding relationships, and (c) analytic rabbit holes. Combined, these subsections are intended to provide a foundation from which to draw important lessons in the use of Dedoose analytic functions.

This chapter now continues by exploring essential techniques for organizing and coding raw qualitative data within the Dedoose environment, including establishing coding frameworks and applying them systematically across diverse data sources. It then examines how researchers can identify meaningful patterns and relationships, revealing areas of interest in the web of connections in the data. Finally, the discussion addresses common analytical pitfalls researchers encounter, including misleading lines of inquiry, proper use of great quote, avoiding theory bits, and offering practical strategies for maintaining focus on research objectives while maximizing the possibilities for generating credible, insightful findings.

## 2.3 Getting Started With the Analysis of Raw Data

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Qualitative inquiry encompasses a variety of analytical approaches, and further readings are suggested for those considering adoption of specific qualitative theoretical perspectives or analytic models. The research literature features diverse

methodological practices that can be tailored to individual study designs, including constant comparative analysis, thematic analysis, discourse analysis, and content analysis. Various coding approaches, theoretical, selective, and conceptual, are noted for their effectiveness in category building (Charmaz, 2014; Kaczenski et al., 2024, Guest et al., 2012; Patton, 2015; Saldana, 2025). While these methodologies offer distinct advantages aligned with particular theoretical orientations, they share the fundamental elements of initial coding followed by categorization and refinement, which remain essential for developing meaningful analysis of qualitative data.

The journey from raw data to meaningful insights requires a structured approach that balances methodical organization with creative and systematic interpretation. This section explores the foundational steps of qualitative data analysis, beginning with effective data management strategies that set the stage for successful analysis. We then examine coding techniques as the essential bridge between raw information and interpretable patterns, followed by systematic approaches to building evidence through iterative analysis steps. Finally, we provide practical guidelines for developing efficient and comprehensive codebooks that serve as both analytical tools and documentation for your research process. Whether you are new to qualitative analysis or seeking to refine your existing methods, these subsections offer concrete strategies to transform unstructured information into cohesive findings that address your research questions.

Analyzing raw data is the critical first step in any qualitative research process. When working with data, this initial phase involves organizing and performing preliminary examinations of your collected information. The process begins with properly formatting and preparing your data sources, whether they are interview transcripts, field notes, survey responses, or multimedia content.

### 2.3.1 The Role of Data Management in Analysis

This subsection explores how effective data management forms the foundation for successful qualitative analysis. We discuss strategies for organizing, storing, and tracking your data in ways that facilitate both access and security. Later in Chapter 4, you will find practical approaches to data preparation, including transcription considerations, file naming conventions, and documentation practices that support analytical rigor and transparency.

The management of data can serve as a preliminary analysis. Moving and sorting data and looking for gaps are examples of management tasks that carry meaning for the researcher. Data management is discussed in further detail in Chapter 4, Data Management. First, consider how management and analysis share common ground.

An advantage of qualitative analysis over quantitative analysis is the ability to add and manage new data to a study during the analysis process. Flexible emergent

### BRUCE'S TIP #5

#### Writing Memos in Dedoose

It is important for the novice researcher to recognize when they are delaying more advanced analytic thinking by engaging in clerical organizational tasks. Procrastination is not analysis.

design practices encourage the researcher to allow the focus of the study to dictate if further data gathering is beneficial. When analyzing the data, the appearance of gaps, omissions, or broken lines of inquiry may warrant further investigation. In such cases, the researcher is encouraged to return to the setting and gather new data. It is important to fill in these gaps in the data as soon as possible while you still have access to the setting. This is not always possible due to changes in the naturalistic setting or time and resource limitations of a study. That said, carefully consider strategies to resolve such matters so as to avoid limitations to study findings. Drawing upon data triangulation, the researcher may identify alternative sources of qualitative evidence.

### 2.3.2 Coding Data

Coding qualitative data involves many versions of wandering about in a time-consuming immersion while remaining inductive and staying open to what it all means as long as possible. When exhausted from this phase, the researcher moves to axial connections and building categories of related meanings. From these categories, major themes are established, and ideally, analysis may support the discovery of the elusive overarching theme. The process makes meanings from the raw data.

It is essential to have a working knowledge of these different stages and the self-awareness of knowing when the analytic process is shifting between each stage. First let's define what a code is and how to make one. A code in qualitative analysis is a word or short phrase that symbolically assigns a summative, salient, and/or essence/nuance capturing attribute to a portion of data. Codes serve as labels that help categorize, organize, and make sense of raw information, whether it is interview transcripts, field notes, images, or other qualitative materials. Creating effective codes involves identifying meaningful segments of data and applying labels that capture their significance in relation to your research questions.

Codes can be organized hierarchically, allowing you to create parent codes with more specific child codes nested beneath them. When applying codes to your data, highlight the relevant text segment and select the

appropriate code from your established list. Remember that codes may be descriptive (identifying what is present in the data), interpretive (reflecting the researcher's understanding), or pattern-based (identifying recurring themes). The most effective coding schemas often evolve throughout the analysis process, becoming more refined as your familiarity with the data increases and patterns emerge.

Defining the code is as important as coming up with a label or tag to call it something. Keep in mind that these labels are normally one word. Occasionally two words may be required to appropriately label a worthy issue emerging from your immersive review of the raw data. Anything more than one or two words is quickly turning into a definition rather than a label. A code definition is a clear, concise description that explains what a specific code means, what criteria must be used when applying it, and how it differs from other related codes in your analysis framework. It serves as a critical reference point that ensures consistent application across different coders, materials, and time periods within a research project. An effective code definition includes the code's conceptual boundaries (what it does and doesn't include), examples of when to apply it, potential exceptions, and how it relates to your research questions or theoretical framework. Code definitions collectively form the foundation of your codebook and help maintain analytical trustworthiness by reducing subjective interpretation and providing transparency about your methodological decisions.

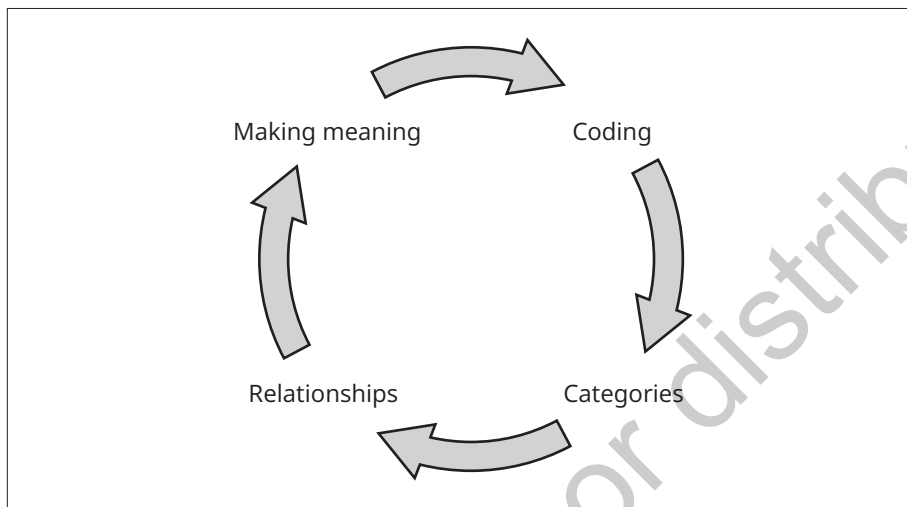
This section introduces the fundamental concepts of qualitative coding and provides practical guidance for implementing coding strategies. It began by defining codes as symbolic labels that capture meaningful attributes of data segments and explained the process of creating them. The section outlined different types of codes (descriptive, interpretive, and pattern-based) and emphasized the importance of developing clear code definitions to ensure consistent application. We discussed how to organize codes hierarchically, apply them to data segments, and refine your coding schema as analysis progresses. The guidance provided here establishes the groundwork for transforming raw qualitative data into structured information that can be systematically analyzed to reveal patterns, relationships, and insights relevant to your research questions.

### 2.3.3 Building Evidence/Analysis Steps

The process of coding is iterative and involves different activities outlined in Figure 2.2, The Coding Process. The process involves data immersion, open coding, category building, identifying themes, and reaching saturation. This is achieved through coding; building categories; developing relationships in your coding, data, and categories; and making meaning.

Qualitative analysis begins with deep immersion in the data, where researchers thoroughly familiarize themselves with the content before applying any formal codes. This foundational step involves reading and re-reading transcripts, field notes, or other materials to develop an intuitive understanding of what participants

Figure 2.2 The Coding Process



are communicating. From this immersion, researchers transition to open coding, where they identify and label meaningful segments without rigid preconceptions. As codes accumulate, patterns naturally emerge, allowing researchers to group similar codes into broader categories. This movement between data, codes, and categories is not linear but cyclical: Researchers continuously revisit earlier stages as new insights develop, refining codes, reassessing categorizations, and sometimes returning to the raw data with fresh perspectives.

The iterative nature of this process is particularly evident in the transition from categories to themes. While categories organize related codes, themes represent the underlying meanings and relationships between categories that address research questions. Researchers may cycle through multiple rounds of category refinement before coherent themes emerge, often discovering connections that weren't initially apparent. Throughout this process, constant comparison, systematically comparing new data against existing codes and categories, helps ensure analytical consistency while allowing for evolution. As analysis progresses, researchers begin to identify when new data no longer generates unique insights (saturation), though they remain open to contradictory evidence that might challenge emerging interpretations. The ability to easily revise coding structures, visualize relationships between concepts, and track the evolution of analytical frameworks supports this dynamic approach to qualitative analysis.

The culmination of this iterative process is meaning-making—synthesizing patterns and themes into conceptual models or theoretical frameworks that explain the phenomena under study. This phase involves stepping back from detailed coding to consider broader implications, integrating findings with existing literature,

and articulating how the analysis contributes to understanding the research problem. Even at this advanced stage, researchers may return to earlier data or collect additional information to address gaps or inconsistencies. The dynamic interplay between coding, categorization, relationship-building, and meaning-making enables researchers to develop nuanced interpretations that remain grounded in participants' experiences while achieving conceptual depth. This systematic yet flexible approach ensures that conclusions are both empirically sound and theoretically meaningful, ultimately producing insights that extend beyond mere description to offer substantive contributions to knowledge.

The steps for building evidence in qualitative analysis typically include the following:

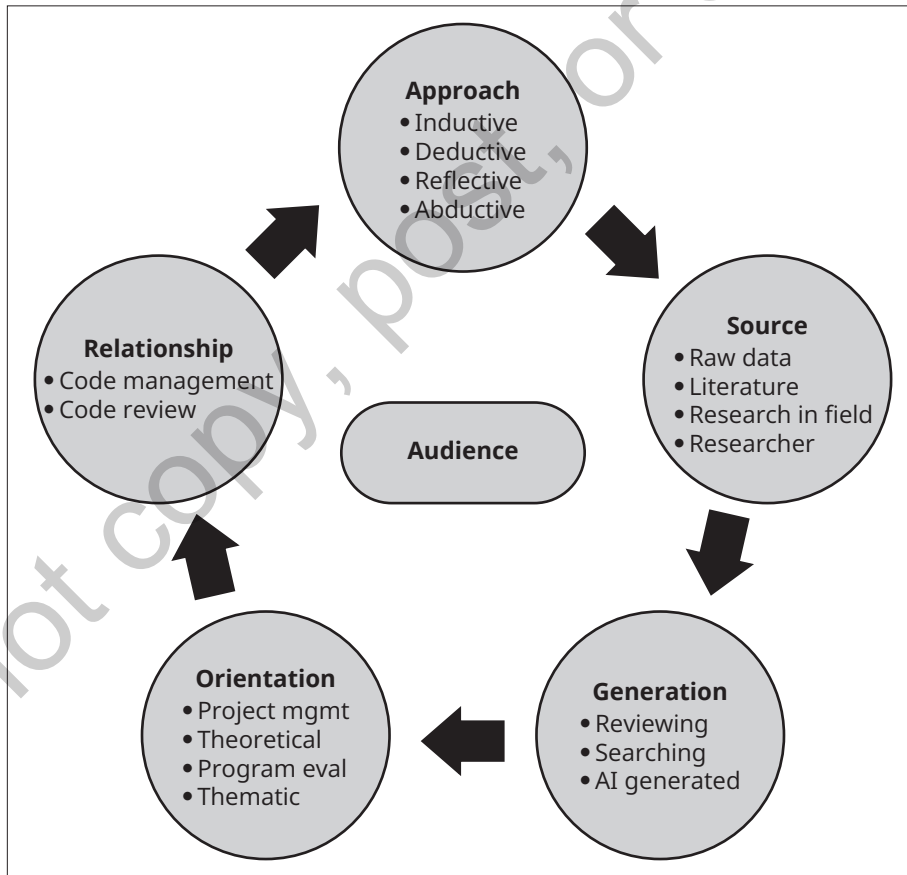
1. Data immersion: Thoroughly familiarizing yourself with all collected data through multiple readings and review sessions to develop an intuitive understanding of the content
2. Open coding: Identifying and labeling meaningful segments of data without rigid preconceptions, creating initial codes that capture key concepts
3. Category building: Grouping similar codes into broader categories that represent related concepts or phenomena
4. Theme identification: Discovering underlying patterns and relationships between categories that address research questions and represent significant insights
5. Constant comparison: Systematically comparing new data against existing codes and categories to ensure consistency while allowing for refinement
6. Saturation assessment: Determining when new data no longer generates unique insights or contributes new understanding to the analysis
7. Relationship development: Exploring and documenting connections between codes, categories, and themes to build a coherent analytical framework
8. Meaning-making: Synthesizing patterns and themes into conceptual models or theoretical frameworks that explain the phenomena under study
9. Verification: Testing emerging interpretations against the data, seeking contradictory evidence, and ensuring conclusions are firmly grounded in the data

These steps are not strictly linear but form an iterative cycle where researchers continuously move between stages, refining their analysis as new insights emerge.

One way to understand making meaning of your data is to consider Figure 2.3, Making Meaning. Here, the aim of the researcher is to make their findings accessible to their audience through clearly sharing their approach; carefully describing their data and code sources; understanding and authentically communicating how the codes were generated; revealing the orientation of the coding, such as the methodological approach to the analysis; and developing relationships that become clearer as the analysis proceeds.

The iterative process of building evidence through systematic analysis represents the transformative heart of qualitative research. As you move through cycles of coding, categorization, and thematic development, your understanding of the data evolves from descriptive recognition to interpretive insight. Remember

Figure 2.3 Making Meaning



that this process rarely follows a linear path, as productive analysis often requires revisiting earlier stages as new patterns emerge or initial interpretations require refinement.

The strength of your analysis ultimately depends on your willingness to engage deeply with the data, challenge preliminary assumptions, and remain open to unexpected connections. By maintaining careful documentation of your analytical decisions and regularly returning to your research questions as anchoring points, you create a transparent trail of evidence that enhances the credibility of your findings. This systematic approach to building evidence not only produces more robust interpretations but also prepares you for effectively communicating your analysis to diverse audiences, from academic peers to community stakeholders.

As you transition from analysis to presentation of findings, the structured evidence-building process described in this section provides the foundation for compelling narratives that authentically represent participant experiences while addressing the theoretical and practical aims of your research.

### 2.3.4 Developing a Codebook—Tips and Guidelines

This subsection provides practical direction for creating comprehensive codebooks that enhance analytical consistency and research transparency. It offers some examples of effective codebook structures, discussing essential elements such as code definitions and application criteria. This guidance emphasizes how well-designed codebooks serve multiple functions, from supporting analytical precision to enabling knowledge transfer among research team members.

Every qualitative research project is different. These seven steps will help you develop a strong and effective codebook. A well-constructed codebook serves as the backbone of rigorous qualitative analysis, providing structure and consistency across your analytical process. Whether you are working independently or as part of a research team, these guidelines will help you create a codebook that facilitates systematic analysis while remaining flexible enough to accommodate the evolving nature of qualitative inquiry. The following steps, adapted from Kaczynski et al. (2024, p. 89) outline a practical approach to developing a comprehensive codebook that supports both methodological rigor and interpretive depth in your research. All projects and methodologies are different; here are seven steps to help you develop a strong and robust coding tree:

1. **Keep code names short and relevant:** *Always include a code definition for consistent application by you and others.*
2. **Do not force codes into a hierarchy:** *If not related to any other concept, leave it at the top level.*

3. **Separate inductive thematic codes from other code groupings:** Consider separating deductive/theory-based codes from other code groupings, such as project management codes.

4. **Make sure a code only appears once:** Do not put “Benefits” under “Program A” and again under “Program B” in the codebook.

CAQDAS TIP: Code co-occurrence charts will help identify when codes overlap on the same excerpt, making it easy to identify when “Benefits” co-occurred with other codes in your study.

5. **Do not combine multiple concepts in a code:** Ensure that a single code refers to a single concept. Example:

**Wrong:** Code A: *Skeptical Attitudes About Government Policy*

**Correct:** Code A: *Skeptical Attitudes*

Code B: *Government Policy*

6. **Keep a code decision log:** Capture changes to your codebook, merged codes, and so forth, and memo on the purposes behind the changes. This will help scaffold your analysis and ensure you do not undo intentional changes.

7. **Prune your codes regularly:** Merge, reorganize, rename, check interpretations, and definitions throughout your project.

A well-developed codebook serves as the cornerstone of trustworthy qualitative analysis, providing structure without sacrificing flexibility as interpretive understanding evolves. The most effective codebooks balance comprehensiveness with clarity, offering detailed definitions and exemplars while remaining adaptable to emerging insights. By documenting coding decisions, boundary cases, and analytical shifts throughout the research process, researchers create not only a practical guide for consistent application but also a transparent audit trail that strengthens methodological credibility. Regular review and refinement of the codebook through team discussions and iterative review ensures that analytical categories remain responsive to the data rather than forcing data into predetermined frameworks. This dynamic approach to codebook development acknowledges qualitative analysis as both systematic and inherently interpretive, enabling researchers to maintain methodological discipline while honoring the complexity and nuance of participants’ lived experiences.

The initial engagement with raw qualitative data demands a strategic balance between systematic organization and interpretive openness. Effective data management establishes the foundation for analysis, creating accessible structures that facilitate rather than constrain analytical thinking. As researchers move into coding processes, they begin transforming raw data into meaningful analytical units,

identifying patterns while remaining alert to unexpected insights that may challenge preliminary understandings. Building evidence requires methodical progression through increasingly abstract analytical levels, with each step grounded in transparent connections to source data. The development of a comprehensive yet flexible codebook provides crucial scaffolding for this analytical journey, offering consistent language for identifying patterns while accommodating emergent understandings. Throughout these initial analytical phases, researchers must cultivate both methodological discipline and interpretive sensitivity, recognizing that credible qualitative analysis involves not merely organizing data but engaging in a reflexive dialogue between systematic procedures and the rich, complex meanings embedded within participants' experiences.

## 2.4 Building Connections and Finding Relationships

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After establishing a solid foundation through data management and coding, qualitative researchers face the crucial task of identifying meaningful patterns and relationships within their data. This section explores the analytical journey from isolated codes to integrated theoretical insights. The following examines how researchers can move beyond descriptive coding to identify connections, contrasts, and conceptual relationships that illuminate the phenomena under study. The process of building connections represents a pivotal transition in qualitative analysis—the point where researchers begin to transform fragmented observations into coherent theoretical understanding. Through systematic comparison, pattern recognition, and theoretical reflection, researchers can discover relationships that address their research questions and contribute to broader disciplinary knowledge. The following subsection provides practical strategies for visualizing and mapping these connections to develop robust theoretical frameworks grounded in empirical evidence.

### 2.4.1 Visualizing Connections Through to Meanings

The field of qualitative research continues to advocate for methods to improve the visualization of credible research findings. With the progressive adoption of technological tools in research analysis, data visualization increasingly offers the means to deconstruct complex relationships that enhance the qualitative analytic process. Visuals serve as powerful analytic tools that expose evidence and stimulate insights into the unexpected. This, in turn, inductively opens the researcher to new thoughts (Salmona et al, 2024). Visuals are built on the larger body of data from a study, not from a single key bit of data. By looking at phenomena in depth, the researcher is thus positioned to tell those broader stories.

The application of data visualization during the analysis process supports the construction of larger meanings and the reporting and transference of credible

results. This potential to visually share and transfer dense meanings to a larger context is an effective way to identify and report complex patterns in data. It is important to note that, given the challenges of working with qualitative data, visualization can also serve as a risky two-edged sword. It is imperative that the researcher avoids being drawn prematurely to unsubstantiated patterns. Robust qualitative analysis must ensure that meanings are not just figments of the researcher's imagination (see more in Section 2.5.3 Avoiding Theory Bits later in this chapter). Trustworthiness criteria assist the researcher by linking findings and interpretations to authentic evidence. The sharing and transferring of meanings to a larger audience involves the transferability of evidence-based qualitative findings that are credible and trustworthy. Thus, visualization is a way of looking into the analysis process and exploring higher-level connections that may not otherwise be seen.

In essence, visualization, using technological tools, enhances the researchers' ability to see more complex patterns and connections of evidence. A potential methodological weakness, however, is that the researcher may stop thinking and lose analytical lines of inquiry as technology increases the use of visualization. As a result, attention may focus on the visual message at the expense of what lies behind the visualization. Regrettably, lessons learned regarding the dangers of theory bits have the potential to be repeated as the analytic use of visualizations increases.

Yet, visualizing can aid the researcher in finding and avoiding rabbit holes. When examining qualitative data, researchers often encounter compelling but tangential pathways that draw attention away from the central research questions. These "rabbit holes" can consume disproportionate time and analytical energy while yielding limited insights relevant to the study's purpose. Visualization tools help researchers recognize when they are veering off course by providing a macro-level view of the analytical landscape. By mapping connections between emerging codes, categories, and themes, researchers can more readily identify which analytical paths warrant deeper exploration and which represent interesting but ultimately distracting offshoots. The visual representation serves as a constant reminder of the study's conceptual boundaries, helping researchers make conscious decisions about analytical priorities rather than following intriguing but peripheral lines of inquiry that risk fragmenting the analysis and diluting its coherence.

Visualizing helps the researcher keep the study focus front and center throughout the analytic journey, serving as both an analytical tool and a reflexive checkpoint against drift from research questions. For researchers interested in exploring cutting-edge approaches to qualitative data visualization, the work of Paulus and Lester (2022) on collaborative digital analysis, Zhao et al.'s (2022) innovations in multimodal representation, and Robinson and Williams' (2024) framework for integrating visual analytics with interpretive phenomenology offer valuable methodological insights. The annual Digital Tools for Qualitative Research conference also showcases emerging visualization technologies designed specifically for qualitative inquiry, while Miles et al.'s (2025) updated compendium provides

a comprehensive overview of visualization techniques across diverse qualitative traditions.

### Further Resources

Paulus, T. M., & Lester, J. N. (2022). *Doing qualitative research in a digital world*. Sage.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2025). *Qualitative data analysis: A methods sourcebook* (5th ed.). Sage.

Robinson, C., & Williams, H. (2024). Interpretative phenomenological analysis: Learnings from employing IPA as a qualitative methodology in educational research. *The Qualitative Report*, 29(4).

Zhao, B., Gong, M., & Li, X. (2022). Hierarchical multimodal transformer to summarize videos. *Neurocomputing*, 468, 360–369.

Visualization technologies in qualitative research serve as double-edged tools, illuminating analytical pathways while potentially oversimplifying complex phenomena. The most effective approach treats visualization not as an end but as a dynamic partner in interpretive thinking, helping researchers identify productive lines of inquiry and avoid distracting rabbit holes (more in Section 2.5). By maintaining a critical dialogue between visual representation and conceptual understanding, researchers can leverage visualization's organizational power while preserving the interpretive depth essential to qualitative inquiry. This balanced approach yields analyses that are simultaneously sharper and more nuanced, enabling researchers to navigate complex data landscapes.

In this interplay between visual representation and conceptual understanding, researchers can harness the clarifying power of visualization while maintaining the interpretive depth that distinguishes exemplary qualitative inquiry, ultimately producing research that is both methodologically sophisticated and authentically grounded in participants' lived experiences.

## 2.5 Analytic Rabbit Holes

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During data analysis, the qualitative researcher may become so immersed in the data that lines of inquiry may blur, cross, or enter a never-ending maze. Knowing if it is day or night may become challenging for the completely immersed researcher. The profound engagement with participant narratives, field notes, and interpretive frameworks can simultaneously be the qualitative researcher's greatest strength and most perilous vulnerability.

This immersion or losing of oneself in the richness of human experience captured in text, image, and observation is precisely what enables the discovery of

nuanced meanings and hidden patterns. Yet it is also what can lead the researcher down what we term “analytic rabbit holes”: deceptively promising pathways of inquiry that lead to confusion, circular reasoning, or interpretive dead ends rather than illumination.

The novice and experienced researcher alike may find themselves captivated by an elegant quote that seems to perfectly capture a phenomenon, only to discover upon deeper analysis that it represents an outlier rather than a representative theme. Others might become entangled in theoretical frameworks that, while intellectually seductive, ultimately obscure rather than clarify the lived experiences of participants. Some researchers find themselves paralyzed by the multiplicity of valid interpretations possible within a single dataset, unsure of how to faithfully represent this complexity without overwhelming readers or losing analytical coherence.

This section discusses these common challenges that arise when navigating the tangled nature of qualitative analysis. More importantly, it offers practical strategies that enhance efficient and effective data analysis without sacrificing the depth that makes qualitative research so valuable. From establishing analytical boundaries and implementing systematic audit trails to crafting procedural safeguards against confirmation bias and employing team-based reflexivity exercises, these approaches help researchers maintain their bearings even when deeply immersed in their data.

By acknowledging the reality of analytic rabbit holes and equipping ourselves with strategies to recognize and address them, we transform potential methodological pitfalls into opportunities for more rigorous and insightful qualitative research.

### 2.5.1 Misleading Lines of Inquiry

Knowing if you are on the right track or chasing your tail happens to the best of us when analyzing social science data. The difference often relies on the researcher’s attention to staying connected to the frame of the study design. Purpose, focus, and key research questions are the guiding light during analysis.

High-quality analysis requires knowing the difference between a great quote and a theory bit. This distinction is a critical point. Section 2.5.3 will discuss the

#### **BRUCE’S TIP #6**

##### **Keep Your Focus Statement Front and Center**

Print your focus statement on a piece of paper and tape it to the top of your computer screen.

importance of avoiding the misuse of theory bits and strategies to turn a theory bit into a great quote. Great quotes, on the other hand, hit the nail on the head for the researcher. This next section addresses the proper use of great quotes.

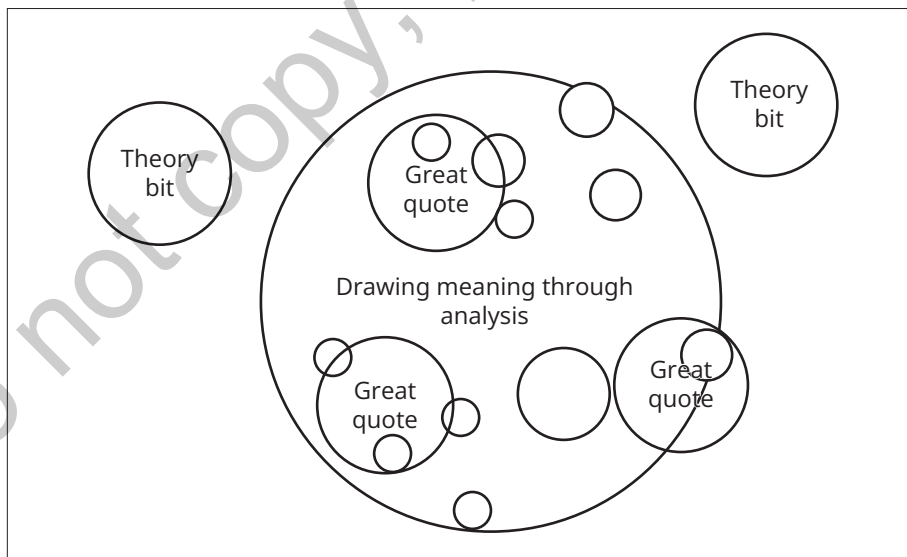
## 2.5.2 Properly Using Great Quotes

During the analysis process, the researcher searches for evidence that expresses meanings in the voice of the other—that is, bringing the voice and perspective of the participants in a study to life. These great quotes succinctly contextualize meanings through an authentic voice beyond what the researcher may construct.

As shown in Figure 2.4, great quotes are supported and connected from multiple sources of data. The great quote thus represents a vivid example from a much larger body of evidence.

As the researcher codes data, meanings and labels are imposed. The researcher identifies important bits of data. In doing so, the researcher reduces the volume of raw data by filtering and distilling the raw data into these important bits or excerpts, which are then labeled and defined. Some of these excerpts carry more weight and meaning than others. The researcher codes these respondent nuggets for future consideration as “great quotes,” allowing easy future retrieval, and then moves on. Moving on is an important step to take in the context of a reflective process. When analytically filtering, the researcher needs to continue to dig for more meanings and not get distracted by a potential theory bit and disengage from further critical analysis.

Figure 2.4 Theory Bits and Great Quotes



At times, the researcher finds a great quote, a segment of text that the researcher determines is better expressed by the respondent than by the researcher. When a code label is used by the respondent as a specific term with a unique meaning, then this represents an *in vivo* code. These codes are derived directly from the language of participants rather than being created by the researcher, preserving the authentic voice and perspective of those being studied. *In vivo* codes are particularly valuable when participants use specialized terminology, culturally specific phrases, or innovative expressions that capture their experiences in ways that researcher-generated terms might not. By incorporating the actual words of participants into the coding framework, researchers can maintain greater faithfulness to participants' worldviews and minimize the imposition of external interpretations on the data.

As the researcher inductively and deductively shifts back and forth through the data during the analysis process, alternative explanations are considered and different paths of inquiry are explored. Making sense from findings involves the researcher's interpretations of the evidence. For the researcher, the selection and reporting of great quotes is an important element in this process. Inductive–deductive shifting allows the researcher to reflect on their role as researcher in the analysis process and make clear their contribution in attaching meaning during interpretation.

It is important to point out that reflexivity, as such, is not an attribute that should be used to categorize qualitative researchers into novice or experienced. This discussion concerning the differences between a great quote and a theory bit is relevant to all qualitative researchers, regardless of the level of expertise.

Qualitative researchers strive to promote high standards of empirical inquiry through practices such as researcher as instrument, data triangulation, multiple meanings, staying inductive, and respecting the other voice. Reflexivity draws on these practices and drives efforts to apply and enhance analytic skills. In this sense, personal awareness is key to distinguishing between a great quote and a theory bit. Promoting personal awareness requires remaining open to recognizing that the analysis process includes knowing that much remains unknown.

### 2.5.3 Avoiding Theory Bits

Before further discussion of the analysis process, it may be helpful to consider potential errors that researchers may encounter. There are always potential pitfalls that qualitative and mixed methods researchers may encounter when selecting the best evidence to use when building a compelling argument. One such potential pitfall is the identification and inappropriate use of theory bits. In the following section, theory bits are used as an example of what isn't good analytic practice when researchers prematurely draw conclusions in the analysis process.

The potential misuse of theory bits during the data analysis process provides an excellent example of how credible research can be compromised. Theory bits

are unsubstantiated points of meaning that the researcher has deductively drawn from a fragment of data (Patton, 2015, p. 589). Meaning from this fragment may distort analysis because a fragment can grab the researchers' attention and sound and feel so correct. Qualitative research practices promote inductive inquiry that strives to avoid such premature deductive pitfalls in the interpretation of meanings. Through the adoption of sound qualitative practices, the researcher is better positioned to promote improvements in the reporting of credible evidence.

It is important to clarify that this discussion of the potential pitfalls of using a theory bit is different from the use of a great quote identified during data analysis. Looking at what something isn't often helps clarify what it could look like. In essence, the theory bit stands alone and apart, whereas the great quote is supported by a larger body of related evidence from the raw data. Section 2.5.2 provides a more detailed discussion of these distinctions and offers steps on how to label or tag text as "Great Quotes" for future retrieval and reporting.

More than 50 years ago, Glaser and Strauss (1967) introduced the concept of a theory bit as a potential issue of concern for qualitative researchers when adopting grounded theory analysis techniques. As the founders of grounded theory, they maintained that building meaning on a theory bit was a misuse of grounded theory methodology. Theory bits are no longer of unique concern solely to grounded theory. Meaning distortions from theory bits may occur at any stage of the analytic process. The worrisome potential misuse of theory bits may impact any qualitative theoretical orientations.

This analytic concern continued to grow for Glaser (1999, 2002, 2010) as qualitative research has expanded and integrated the applications of grounded theory techniques broadly into qualitative inquiry. His predictions from 25 years ago have mostly proven accurate and continue to require our attention (Editorial Board, 2022). In essence, grounded theory techniques include (a) inductive open coding, (b) axial coding to build meaning-making patterns, (c) constant comparative thematic theory building, and (d) saturation, when no new data are emerging (Corbin & Strauss, 2015; Patton, 2015; Saldana, 2025). These steps are presented as a simple representation of a coding sequence and are not intended to represent a full discussion of grounded theory methodological practices. Of importance here is the increasing acceptance of grounded theory coding practices that have now extended beyond qualitative researchers to "those quantitative researchers who adopt it in mixed-methods projects" (Charmaz, 2014, p. 12). In addition, this growing appeal to widely adopt elements of grounded theory practices in various qualitative and mixed methods applications demands greater vigilance by social science researchers of potential analytic mistakes.

Glaser (2010) contended that it is increasingly likely that "theory bits will be used almost unconsciously" (p. 11). When used incorrectly, theory bits may distort analysis because they grab our attention and prematurely shape our perception. Since they sound so correct, theory bits may cause several pitfalls, including (a) inappropriately labeling a person or situation badly, (b) providing an analytic shortcut to emergent fit, (c) encouraging an attraction to intuitive findings lacking

evidence, and (d) having the ability to thwart further analysis. As Glaser (1999) cautioned,

The danger, of course, is that they might be just plain wrong or irrelevant unless based in a grounded theory. Hopefully, they get corrected as more data come out. The grounded theorist should try to fit, correct, and modify [theory bits] even as they pass his or her lips. (p. 844)

In practice, this misuse of limited data during analysis represents an incomplete process of low-level analytic thinking. The resulting lack of supporting evidence causes the analysis process to fail in the building of credible complex relationships.

#### **BRUCE'S TIP #7**

##### Have You Found "Fool's Gold"?

If you find yourself building meaning around a single bit of data—take a moment and ask yourself: Is this a theory bit, or does it open the door to an important finding? How much weight can this bit of data carry? Is the evidence taking you through the door to something important, or are you reading too much into what you see? Don't trust your intuition; this is empirical social science.

High-quality qualitative data analysis involves uncovering and constructing credible connections between the research questions and data. Data analysis is defined by Schwandt (2015) as "the activity of making sense of, interpreting, and theorizing data" (p. 57). Qualitative analysis is considered both art and science and, thus, is demanding and potentially problematic for the researcher. The focus of a qualitative study aides the qualitative researcher by guiding methodological decisions and providing structure to meaningful analysis. As Patton (2015) explains, "Qualitative analysis ultimately depends on the analytical intellect and style of the analyst. The human factor is the great strength and the fundamental weakness of qualitative inquiry and analysis—a scientific—two edged sword" (p. 522).

The qualitative researcher is therefore confronted with distilling knowledge that can be utilized by the intended audience. It is no wonder that a researcher may unconsciously be drawn to theory bits. Clearly, strategies to respond to this potential analytic mistake from theory bits are needed to strengthen practice.

## 2.5.4 Effectively Reporting Complex Multiple Meanings

As social science research adopts innovations in data visualization, new methods continue to emerge that can aid in recognizing potentially flawed data analysis. The complexity of meanings that emerge during qualitative analysis is primarily the result of working with data in social naturalistic settings. It is also partly the result of drawing multiple meanings from the evidence. Both of these challenges are an unavoidable byproduct of conducting research in naturalistic settings. The social sciences are clearly presented with unique advantages and disadvantages when it comes to empirical inquiry in the social world.

When a study fails to adequately analyze complex relationships, the visual reporting of evidence exhibits a lack of adequately interpreting and transforming the evidence to findings. In such situations, the analysis process has likely failed to investigate different paths that have been revealed and connect these meanings to results. This discussion applies the term *multiple meanings* to describe the qualitative analytic exploration of multiple relationships and relevance to the social problem under investigation. The concept of drawing multiple meanings from the analysis of data provides a means to visually investigate complex layers of evidence comprising multiple interpretations contained within a single study. Denzin and Lincoln (2000) applied the term *bricolage* to building multiple layers and interpretations during qualitative inquiry. This term metaphorically addresses the complexity of emergent design and the multiplicity of meanings during analysis (Koro-Ljungberg, 2001; Rogers, 2012).

Qualitative analysis involves an ongoing struggle with ambiguity. The analytical process rarely follows a linear path, as researchers navigate through layers of meaning, contextual nuances, and interpretive possibilities. Unlike quantitative research with its standardized procedures and statistical certainty, qualitative analysis requires researchers to make judgment calls about what constitutes significant patterns amid complex, sometimes contradictory data.

Given such ambiguity surrounding the process of qualitative analysis, the researcher is continually challenged when drawing credible and trustworthy findings from gathered evidence. This challenge necessitates implementing credible methodological strategies to establish the trustworthiness of interpretations. Researchers must maintain reflexivity about how their own perspectives influence analytical decisions, employ techniques like triangulation to verify findings across multiple data sources, and document their analytical processes transparently. The tension between embracing interpretive flexibility and ensuring a systematic analytical approach remains a defining characteristic of qualitative research, requiring researchers to develop both creative insight and disciplined analytical practices to produce findings that accurately represent participants' experiences while contributing meaningful theoretical understanding.

An efficient way of reporting linkages and processing relationships among complex layers of evidence is through visual displays. For example, charts, graphs, tables, and mind maps are increasingly applied in both qualitative

and quantitative visual reporting (Anfara et al., 2002; Kaczynski, Salmona, et al., 2014; Martelo, 2011; Richards, 2015; Salmona et al., 2024). Using technological tools for visualizing qualitative evidence supports and advances this growing practice of investigating complex layers of evidence comprising multiple meanings.

Qualitative software relational databases allow researchers to build connections through a set of relationships in which every piece of information is connected: from media to descriptors, excerpts to media, and codes/tags and tag weights/ratings to excerpts (Dedoose, 2025). These relationships allow software analytic features to use any and every piece of information by enhancing how the data are displayed, filtered, analyzed, and exported. Examples include word clouds, concept maps, sociograms, and bubble plots sized by frequency, which are built on natural connections around themes.

- *Code Co-Occurrence*—code-by-code frequency matrix
- *Code Weight Descriptor Bubble Plot*—perceptual map of average code weight associated with the application for three codes across selected descriptor field subgroups
- *Code Frequency Descriptor Bubble Plot*—perceptual map of application frequency for each of three codes by selected descriptor field subgroups

Note: Refer to the online Dedoose *Learning Center* for further assistance using these functions: [dedoose.info/learn](https://dedoose.info/learn).

#### **BRUCE'S TIP #8**

##### Smart Tips

There are lots of smart tips in Dedoose. Float your cursor over functions and features for pop-up details. See what new ideas you can learn by doing this.

### **2.5.5 Practical Strategies**

Practical strategies can be helpful to promote visualization and enhance the integration of multiple meanings into the qualitative analysis process. Visual mapping techniques provide powerful tools for identifying and exploring relationships between codes, categories, and themes. Creating concept maps, diagrams, or matrices can help researchers literally “see” connections that might remain hidden in text-based analysis alone. These visual representations can reveal patterns of co-occurrence, hierarchical relationships, or conceptual clusters that illuminate

the underlying structure of your data. Consider employing different visual formats, from simple hand-drawn sketches to more elaborate digital visualizations, at various stages of analysis to stimulate new insights and challenge existing interpretations.

The integration of multiple meanings requires researchers to systematically compare interpretations across different data sources, participants, and contexts. Developing a structured approach to comparative analysis, such as creating side-by-side displays of contrasting perspectives or maintaining comparative matrices, can highlight both convergent and divergent patterns. This comparative lens helps researchers move beyond isolated observations to identify more robust, contextualized understandings. Additionally, intentionally seeking alternative explanations for emerging patterns serves as a form of analytical triangulation, strengthening the credibility of final interpretations by ensuring they account for the full range of evidence rather than selectively focusing on data that supports initial assumptions.

The following practical strategies are suggested to promote visualization and enhance the integration of multiple meanings into the qualitative analysis process:

1. Include a disclosure statement in the discussion of analysis procedures when visualizing and reporting great quotes. As Glaser (2010) explains, “A responsible grounded theorist always should finish his or her bit with a statement to the effect that ‘Of course, these situations are very complex or multivariate, and without more data, I cannot tell what is really going on’” (p. 12). Using great quotes in the reporting of findings should include this same practice.
2. Acknowledge that a great quote is only one form of compelling evidence. Do not build the findings around a great quote. Rather, use the great quote to succinctly exemplify findings that are supported with triangulated evidence from multiple sources of data.
3. Ongoing creative use of and advancements in the visualization and reporting of findings are recommended. Robust qualitative findings are a means to visually investigate complex layers of evidence comprising multiple meanings. The continued growth of technological applications will require methodological alignment as we increasingly analyze complex layers of evidence comprising multiple meanings.
4. Be clear when using research terminology, such as *valid* or *significant*, when discussing mixed methods principles. Use of common quantitative language when discussing qualitative concepts may inadvertently imply linear statistical analysis, causal links, or hypothesis testing. Although

such qualitative usage may be somewhat contentious, “validating here refers more to a checking out of interpretations with participants and against data as the research moves along” (Charmaz, 2014, p. 48).

5. Throughout the analysis process, continue to reflect on who is making evidence great. Member checking and empowering participants to choose and weight the quote will aid the researcher in the deconstruction of findings. This practice will also enhance better understandings of the deeper subtext beneath evidence.

These five strategies are offered as a starting point to promote further methodological discussions on the joining of qualitative methodological practices with the growing role of technology in research practice. Rapidly expanding use of technological tools has the potential to distract researchers from qualitative methodological principles that guide and shape inquiry. Researchers must remain diligent in the use of new tools and continually acknowledge that the researcher drives the inquiry, not the tool. Such safeguards will assist in promoting credible findings and reporting trustworthy research to larger audiences.

The journey through qualitative data analysis is rarely linear, and it might be described as finding your way through and out of the maze. As we have explored throughout this section, even the most rigorous researchers can find themselves disoriented in analytic rabbit holes, whether pursuing misleading lines of inquiry, becoming enamored with elegant but unrepresentative quotes, wandering into excessive theoretical abstraction, or becoming paralyzed by the multiplicity of valid interpretations.

These challenges are not indications of methodological failure but rather natural consequences of the depth and complexity inherent in qualitative inquiry. The very immersion that makes qualitative research powerful also creates vulnerability to these analytical pitfalls. Acknowledging this tension is the first step toward more thoughtful, transparent, and trustworthy research practices.

The strategies outlined in this section—establishing clear analytical boundaries, implementing regular reflexivity practices, utilizing peer debriefing, maintaining systematic audit trails, and setting temporal parameters for analysis phases—offer practical approaches to navigate these challenges. These are not rigid prescriptions but adaptable tools to be customized to your specific research context, questions, and methodological approach. Perhaps most importantly, developing the metacognitive awareness to recognize when you’ve entered an analytic rabbit hole is itself a valuable research skill. This awareness, coupled with the disciplined application of the strategies discussed, can transform potential methodological weaknesses into distinctive strengths of your qualitative analysis.

As you continue your research journey, remember that the goal is not to eliminate the deep immersion that characterizes quality qualitative work but rather to

develop practices that allow you to immerse yourself in the data while maintaining your analytical bearings. In doing so, you honor both the complexity of human experience captured in your data and your responsibility to represent that complexity with clarity, integrity, and insight.

The maze of qualitative analysis may be complex, but with thoughtful navigation, it need not be disorienting. By acknowledging the reality of analytic rabbit holes and equipping yourself with strategies to address them, you can emerge from the depths of your data with findings that are not only rich and nuanced but also methodologically sound and trustworthy.

This qualitative research journey requires both a systematic methodological approach and interpretive flexibility, which is a balance this chapter has aimed to illuminate. Beginning with the critical framing elements of purpose and focus statements, we have traced the path through theory alignment, systematic data analysis, and meaningful interpretation. The structured approach outlined here, from coding raw data to visualizing complex relationships, provides essential scaffolding for your interpretive work without constraining the emergent insights that make qualitative research so valuable.

Perhaps most importantly, we have addressed the common analytical pitfalls that can compromise the integrity of your findings. By recognizing the dangers of misleading inquiries, isolated quotations, fragmented theoretical applications, and oversimplified representations of complex phenomena, you are better equipped to produce research that honors the depth and nuance of your participants' experiences. The practical strategies offered throughout this chapter serve not as rigid prescriptions but as adaptable tools to support your unique investigative journey.

As you move forward in your qualitative research, remember that the goal is not merely to describe what exists but to illuminate meaningful patterns and relationships that contribute to deeper understanding. When approached with both systematic attention and interpretive sensitivity, qualitative analysis transforms raw data into compelling narratives that capture the complex realities of human experience and advance knowledge in ways that quantitative approaches alone cannot achieve.

The analytical journey from raw data to meaningful insights requires both a systematic methodical approach and interpretive creativity. Throughout this chapter, we have explored the foundational elements of qualitative analysis: from organizing and managing data to developing coding frameworks, building evidence through iterative processes, and identifying meaningful connections that contribute to theoretical understanding. By establishing efficient approaches to coding, category development, and theme identification, researchers can navigate the inherent ambiguity of qualitative inquiry while maintaining analytical trustworthiness.

As we transition from the purely qualitative approaches discussed in this chapter to the mixed methods paradigm in the next chapter, we recognize that the analytical skills developed here form an essential foundation for more

complex methodological integration. Mixed methods research builds upon these qualitative foundations while introducing complementary quantitative elements that can extend and enhance analytical possibilities. The iterative coding processes, meaning-making strategies, and theoretical development approaches outlined in this chapter provide critical preparation for the more integrated analytical frameworks that characterize mixed methods research. By moving between these methodological approaches, researchers can develop more comprehensive understandings of complex phenomena, leveraging the strengths of both traditions to address multifaceted research questions with greater depth and precision.

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