FOCUS ON METHODOLOGY

Three principles for writing an effective qualitative results section

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Abstract
Writing an effective qualitative results section can be a daunting task. How do you report the findings of the study and tell a compelling story? It is this delicate balance that we strive to navigate in this paper. We offer three principles—storytelling, authenticity and argument—to help writers envision the story they will tell, select the data as evidence for that story and integrate quotations to guide the reader’s interpretation. Practical advice and concrete illustrations make the principles easy to apply to your own writing. Finally, by reflecting on how historical, methodological and disciplinary elements shape their application, you will be able to use these principles to enhance the persuasiveness of your qualitative results section.

Keywords: academic writing; results section; qualitative research

Introduction
Our writing, and our teaching about academic writing, hinges on a key premise—a decent research paper reports a study, but a great research paper tells a story (Lingard & Watling, 2016). For the sake of clarity, we have distinguished the sections of a research paper where study and story are more prominent. We have said that story is largely introduction/discussion and study is methods/results. It’s important, however, not to apply this distinction too rigidly—a good results section not only reports findings but also helps the reader to engage with them. A good results section needs elements of both story and study, and making them coexist is, likely, why a results section is so difficult to write. In this paper, we discuss three principles—scientific storytelling, authenticity and argument—to help writers of qualitative papers grapple with the study/story conundrum.
in their results sections. The principles of authenticity and argument have been previously described in Lingard (2019). This paper updates that publication, elaborating the advice for writers and illustrating with new examples.

**The principles**

1. **Scientific storytelling**

   The word “story” sits uneasily alongside science (“Should scientists tell stories?,” 2013). It creates discomfort because of the belief that science is persuasive on its own. Therefore, anything that seems like embellishing the reporting of a study feels wrong. Our use of the word “story” is not to favor embellishment of science but, rather, to ensure that readers readily recognise what makes the results of a study compelling. The principle of scientific storytelling can offer some guidance towards such a goal.

   A struggle many writers face is deciding what constitutes your results. Is it a list of the themes from your analysis? Or is it something else? If the goal is to compel readers to engage with your study, then your results section should offer them a conceptual understanding of the issue that you're studying more than an inventory of its components. Good researchers interpret and contextualise to make meaning for their readers, and such contextualisation is the basis of scientific storytelling.

   As a general rule, a good story should be evocative, novel and memorable (Simmons, 2019). In scientific storytelling, *evocative* doesn't mean the writing stirs emotion (although it might); instead, it refers to results that captivate and resonate. Similarly, *novel* is not always about presenting a groundbreaking discovery. It is also about offering a different perspective on a known phenomenon. And *memorable* doesn’t mean that your readers will remember every single detail of the paper but, rather, that the key findings will stand out for them. How do you organise your story with these features in mind?

   A place to start is the opening paragraph. As most qualitative studies involve identifying themes, we might be inclined to write an opening paragraph that reads like: “We found five themes: theme 1, theme 2, … theme 5. Theme 1 refers to … theme 5 refers to … Each theme will be described below using quotes from participants”. You might think of this type of paragraph as providing a big picture description of the results, but it does not. That’s an inventory of themes. And while it is not wrong, it doesn’t feel like there is a story to be told. Consider instead this opening paragraph from Bynum et al.’s (2021) paper on experiences of shame.

   The shame experiences described by participants consisted of simultaneous, multi-layered interactions between the individual and their environment. In seeking the meaning of these interactions, we came to understand participants’ shame experiences through the metaphor of fire. Like the potential impact of fire on a substrate, shame could profoundly affect our participants: most reported experiencing intense, insidious and/or deeply troublesome shame reactions that
consisted of globally negative self-assessments. Students reported viewing themselves as “no good” (P10), “completely worthless” (P12), “an inadequate medical student” (P15), feeling “small” (P8, P11) and feeling “stupid” (P6). The emotional experience of shame was often overwhelming: “I felt like I was drowning in this negative emotion that I didn’t have a name for” (P15). We identified two broad structures of the origins of participants’ lived experiences of shame: shame triggers and shame promoters. (p. 188)

In reading this paragraph, you get a sense that the results will be about triggers and promoters of shame. However, that’s not all. The authors used two additional strategies to instill a story flavor in the paragraph. They prepared readers to expect that the relationships among themes will be described in the form of a metaphor, and they infused evocative short quotes to provide a glimpse of the metaphor, while at the same time, capturing readers’ attention.

Opening paragraphs are not the only way to portray the story of your results. In the event that you are more visually oriented, you could also use diagrams to help readers see the connections between your ideas. Here is an example:

**Figure 1**

*Conceptual Diagram Representing a Model of Clinical Learning*

The process of clinical learning was represented using a diagram (Watling et al., 2012). Since the authors intended to evidence each key element of the model, they made the explicit decision to include the diagram at the beginning of the results section. By doing so, the diagram helped orient readers to what was to come and to how each element was connected.

Opening paragraphs or diagrams help lay out the big picture of the story. The rest of the results section is about describing how your intended story relates to your study. To start, remember that not all themes must figure equally in a scientific story. While you could describe all the relationships among all your themes, sometimes you might decide to center your story around one key theme. This is not a random decision. It hinges on whether the theme(s) advances the story in a meaningful way and on whether you have enough data to support it. As this is not a traditional presentation of results, writers should consider explicitly articulating their decision making, as illustrated in this example.

We identified two key findings. The first is the core category—thresholds of principle and preference—as described below. The second is a grounded theoretical framework of how our participants responded to encountering these thresholds. Following recent calls to represent research findings more powerfully (26–28) we have elected to use core narratives that evoke the central theoretical constructs rather than outlining all categories and codes that led to their construction. (Apramian et al., 2015, p. S71)

Not only did the authors decide to focus the story of the results on the key theme of “thresholds of principle and preference”, but they also chose to illustrate its components in the form of narratives, not short quotes. The principle of argument, below, will expand on this strategy.

In addition to considering the use of opening paragraphs or diagrams and how you will explore the relationships among your themes, some thought should be given to the ending of the results section. You may use a summary paragraph, a memorable quote or simply a transition sentence. Regardless of your preference and word count limit, what’s important is that you don’t end with your weakest point. Make a habit of revisiting the flow of the story after your first draft, rearranging for rhetorical purposes.

In using the principle of scientific storytelling, another struggle writers encounter is deciding about the connection between the results and the discussion. The writer is not at fault here. What creates this struggle is the non-linear nature of qualitative studies. Qualitative studies are iterative and evolving; researchers go back and forth between reading and interpreting their data. And the same applies to writing them up. In doing so, you might sometimes wonder or get asked by a reviewer whether a statement belongs to the discussion section. In the traditional IMRD (Introduction, Methods, Results, and Discussion) structure for health professional education (HPE) papers, while a results
section answers the question *How did participants experience this?*, a discussion section answers the question *Now that we know about their experiences, what can we do with this knowledge?*

A quick test to identify if a piece of the results belongs to the discussion is to check the tense of your sentences. We tend to use past tense when describing participants’ perspectives and present tense when providing our interpretation. If such interpretation slips into recommendations of what to do with what participants said, then you have crossed the boundary. For instance, the first sentence below implied that participants had identified the coordinated care plan as a solution. The second sentence, by virtue of its present tense, can be confused with a recommendation.

Many participants spoke of coordinated care planning as a “sophisticated solution” to the recurring problem of patients’ healthcare needs “falling through the cracks” [participants’ experiences]. The routine adoption of such plans may, thus, represent a strategy to improve interprofessional communication and reduce disruptions in care for patients and families [implications of the work].

Similarly, if you write a statement that you think may need a reference, or a statement that has to do with what readers might do in their practice, those statements probably don’t belong in the results section.

While these quick tests will not necessarily solve the results versus discussion dilemma, it should help you orient yourself into the practices of writing in the HPE field, particularly if you come from a discipline where results and discussion are conventionally blended. At a minimum, these tests should prompt you to ask yourself or ask for feedback on whether a description of a finding has a recommendation or implication flavour. If so, then you should either go back to your data to confirm it as a finding or move it to the discussion.

2. Authenticity—selecting the best quotes for the story

Selecting the best quotes from among all those you’ve coded and analysed in your study is harder than it looks. You likely have a wealth to choose from, some of which you’re quite fond of. The principle of authenticity can guide your selection to ensure that each quote offers readers firsthand access to dominant patterns in the data. To achieve authenticity, select quotes that are illustrative of the point you’re making about the data, reasonably succinct and representative of the patterns in data.

*Is the quote illustrative?*

Readers should not have to work to connect the point in your argument and the quote you’ve offered as evidence. The best quote is an explicit illustration rather than an implicit one. Consider the following examples:

> *After leaving their training program, participants expressed profound confusion and disorientation: “It was the most difficult decision I’d ever made, and I didn’t feel any better after making it”. (P5)*
After leaving their training program, participants expressed that the relief they’d hoped for wasn’t immediately apparent: “It was the most difficult decision I’d ever made, and I didn’t feel any better after making it”. (P5)

In the first example, the quote doesn’t explicitly evidence the point of “confusion and disorientation”. The second example alters the lead up to the quote to tighten the connection.

Sometimes, you may also want to use a quotation to say something that you, as the writer, can’t say yourself. In this case, the quote isn’t so much evidencing your point, it’s making a point on your behalf. Consider this example:

Equity and diversity initiatives such as workshops and invited speakers were often viewed as “lip service” (P7) by minority faculty, particularly if larger structures in the institution remained unchanged.

The term “lip service” is a powerful critique, particularly coming from the mouth of a minority faculty participant. This is a moment where paraphrasing would not have had the same impact—readers need to know that this strong position comes directly from participants.

Is the quote succinct?

Anyone who has ever read an interview transcript knows that they are meandering and recursive, full of ellipses and abrupt transitions. Because of this, it can be difficult to find a short quote to illustrate a point, and you need to tighten up a longer one. One tightening technique is to extract key phrases and integrate them into your own introductory sentence to the quote.

Participants who had left their training program reflected that it was a “difficult decision”, immediately after which they “didn’t feel any better”. (P5)

Another solution is to use the ellipsis to signal that you have cut part of the quote out:

Postgraduate training pathways were described as “rigid and automatic, like … a conveyor belt. … You can jump off, but getting back on afterwards is really not easy”. (P13)

The first ellipsis signals that something mid-sentence has been removed. In this case, this missing material did not add content: “like, you know, um, what’s the word I’m looking for, like you’re on a”. The second ellipsis follows a full stop, and therefore signals that at least one sentence has been removed and perhaps more. When using an ellipsis, be careful not to remove material that importantly nuances the meaning of the quote. The goal is not to snip bits and pieces until participants say what you want them to; it is a representation that remains faithful to the gist of the full quote.
As the previous example shows, you may wish to tidy up oral speech to help with succinctness. Changing the wording of a quotation always risks violating the authenticity principle, so writers must do it thoughtfully. Interview transcripts are replete with what linguists refer to as “fillers” or “hesitation markers”, sounds and words such as “ah/uh/um/like/you know/right” (Tottie, 2016). If you’re conducting discourse and narrative analysis, you will necessarily analyse such hesitations as part of the meaning. However, in other research methodologies, you may opt to do some “light tidying up” for readability or ethical reasons, such as the concern that linguistic features might make participants identifiable (Corden & Sainsbury, 2006).

Finally, you may need to alter the wording of a quote to maintain the grammatical integrity of your sentence. Writers commonly need to alter quotes for consistent tense or for agreement of verb and subject or pronoun and antecedent. Use square brackets to signal such changes, as in this example in which verb tenses were changed from past to present to ensure appropriate grammatical flow:

> Clinical supervisors understood that “direct observation [isn’t] always feasible”, particularly in settings where “we [don’t] work side by side with the trainee” and “seniors [are doing] some of the direct supervision of the students. (P2)

Another strategy for succinctness is to put the quotes into a table. While qualitative researchers may chafe at the constraints (and positivist roots) of the table format, it can be used strategically to present complex results at a glance. In this example, Ginsburg et al. (2015) name, define and illustrate the factors their participants considered when interpreting comments on in-training evaluation reports (see Figure 2).

While tables can be used to snapshot the key findings from a qualitative analysis, they should not replace your narrative explanation in the body of the results, nor should they be duplicated. This begs the question: which quotes belong in the body and which belong in a table? One way to decide is to distinguish between “power” and “proof” quotes. Power quotes are the most compelling ones, the quotes that most effectively illustrate your points, while proof quotes are additional evidence that the point was recurrent or, perhaps, somewhat multifaceted (Pratt, 2008, 2009).

Is the quote representative?

Every qualitative researcher has identified a fantastic quote they just can’t wait to put into a paper. Sometimes, however, you discover as you revise the draft that it misrepresents the data, and it has to be removed. The quotes you choose should reflect strong patterns in the data. Discrepant examples serve an important purpose, but their use should be strategic and explicit. Furthermore, your quote selection shouldn’t come from the same one or two highly articulate participants. Distributing your choices across participants better represents the dataset as a whole, even if it means using the second- or third-best example in some instances.
As you select quotes to represent main findings, be sure that you retain sufficient context so that readers can accurately infer their meaning. Sometimes this means including the interviewer’s question as well as the participant’s answer. In focus group research, where the emphasis is on the group discussion, it might be necessary to quote an exchange.
among participants rather than extracting individual comments. The following published example (Greenhalgh et al., 2004) illustrates this technique.

However, there was a strong perception among less affluent pupils that high social class and a privileged education would confer an advantage in the admissions process:

[in response to a question about why a pupil might find it easy to get into medical school]

“The way she carries herself and her grades . . . like at interview if she does well.”

[facilitator] “How would she carry herself?”

“Respectively [sic], talking properly, and dressing appropriately, a lot of confidence.”

“Not saying it in a common accent, say it properly.”

“If they speak well, then they’ll look more well-educated.” (Boys from school B)

This excerpt effectively represents the group engagement with the question rather than a single participant response.

3. Argument

Even an illustrative, representative quote does not speak for itself—writers must incorporate the quote, both grammatically and rhetorically, into their own text. For grammatical incorporation, you need only remember that quoted material is subject to the same sentence-level conventions for grammar and punctuation as non-quoted material. Read this example aloud:

Clerkship directors struggled to remediate unprofessional behavior, “it’s probably the most difficult part of the role, when you come across a recurring professionalism problem.” (P8)

Using a comma to join the quote to the writer’s sentence creates a comma splice and a run-on sentence, which your ear likely hears even if your eye doesn’t instantly recognise it. Read aloud sentences where you’ve inserted a quote to check grammatical incorporation. A simple correction is to replace the comma with a colon.

Clerkship directors struggled to remediate unprofessional behavior: “it’s probably the most difficult part of the role, when you come across a recurring professionalism problem.” (P8)

The colon is a default mechanism for integrating quoted material. And it suffices grammatically much of the time. However, it doesn’t always suffice rhetorically, because it leaves the reader to infer the relationship between the point being made and the
quoted illustration. When the quote perfectly makes the writer’s point, the colon not only suffices, it spotlights the quote without distraction. However, only rarely do quotes perfectly make your point; usually some inference is required, and readers might not infer what the writer intends. Instead of leaving readers to come to their own interpretations, writers should make explicit their interpretation. Such contextualising is a requirement for achieving what Morrow (2005) calls the “balance” of interpretation and quotation.

There are many techniques for achieving this balance between researcher interpretations and supporting quotations. Note in the following examples how the material before the colon provides progressively more contextualisation for the quote:

One resident said: “You can get off the standard training pathway, but getting back on isn’t guaranteed”. (P21)

One resident asserted: “You can get off the standard training pathway, but getting back on isn’t guaranteed”. (P21)

One resident in the focus group disagreed with the idea that training pathways were individualised and flexible in the context of CBME [competency-based medical education]: “You can get off the standard training pathway, but getting back on isn’t guaranteed”. (P21)

Focus group participants debated the flexibility of training pathways in the context of CBME. Some anticipated that training “can be adjusted, for if you need to go slower or you’re able to go faster or you want to do something a bit off the beaten path of residency” (P19), while others contested that “you can get off the standard training pathway, but getting back on isn’t guaranteed”. (P21)

The increasing contextualisation begins with a shift in verb between the first example, which uses the neutral “said”, and the second example, which uses “asserted” to give a sense of the participant’s tone. The third interprets the meaning of the quote even more by situating it in the context of a focus group debate. The fourth example integrates two quotes directly into the narrative structure of the sentence to show the debate that was occurring among participants. And by not using a colon, the last example forces the writer to work harder to weave the quotes into their argument. Such weaving exerts strong rhetorical control over the quote’s meaning.

Use the default colon when you’re drafting—it’s perfect for just getting the pieces into place. But when you revise, aim for more variety and style. This will elevate your results sections beyond a robotic cadence of point-colon-quote, point-colon-quote, point-colon—. And it will ensure that the quotes support and develop the points you’re making.
Sometimes you will want to include a longer quote that cannot be integrated into your own sentence. Such quotes can offer readers a sense of the mood of the interview, or a glimpse of the complex interrelationship among ideas, and you don’t want to cut them back to the point that this dimension is lost. Keep in mind, though, that the longer the quote, the greater the chance that the reader’s attention will snag on something other than what you intend. To guard against this source of incoherence in your results writing, consider applying the “quotation sandwich” technique (Graff & Birkenstein, 2018) to contextualise before the quotation and summarise your interpretation after it. In the following illustration (Emmerton-Coughlin et al., 2017), the transcription of a video excerpt is set off in Box 3, sandwiched by introductory text that sets up what’s being illustrated and summary text that provides detailed analysis of the point:

The next example typifies the bidirectional nature of control dynamics. The surgeon initiates an instruction to modify the surgical technique (see Box 3).

Correct implementation of the surgeon’s instruction relies on the trainee’s correct interpretation of the deictic expressions: “the top part” and “the bottom part”. The trainee responds, again using deixis, “This right here?” and pairs with it a physical localising manoeuvre in order to confirm her interpretation of the instruction given. The surgeon ratifies and then goes on to further refine the instruction with additional information and additional deictic instruction, adding his own physical gesturing manoeuvre. This back and forth highlights a concession by the trainee of a tight degree of control to the instructor during this high-stakes moment involving the identification and protection of a key structure, the bile duct.
This example also demonstrates how to summarise the quote without simply repeating what it says. The reader has already read the quote, which is annotated to highlight the deictic expressions. The text after it exemplifies the opening point about “the bidirectional nature” of this exchange, by using terms such as “responds”, “confirms”, “ratifies” and “back and forth” in the explanation of what’s going on in the example.

Using multiple quotations to support a single point should be avoided. More is only better when there are layers or nuances that a single quote doesn’t do justice to.

Wellness was a nuanced idea for our participants:

“Eating regularly, getting some sleep, so that you’re not a walking zombie.” (P2)

“Recognising when you’re not well, you’re anxious or depressed, your relationships are suffering, you’re impossible to be around.” (P11)

“Basic happiness, like is there any joy in this anymore for me? Not, ‘I’m clinically depressed’ but sort of, ‘I’m just not present in my work anymore.’” (P12)

While “nuanced idea” alerts the reader that the multiple quotes are intended to demonstrate this nuance, this example makes the reader do the work of sketching in the space between the quotes. The following revision is more rhetorically effective.

Wellness was a nuanced idea for our participants. Dimensions of physical health were prominent in participants’ explanations, with many acknowledging the importance of “eating regularly, getting some sleep, so that you’re not a walking zombie” (P2). Mental health was also discussed, in particular “recognising when you’re not well, you’re anxious or depressed, your relationships are suffering, you’re impossible to be around” (P11). And wellness was also understood to extend beyond the conventional notions of physical and mental health, into questions of “basic happiness, like is there any joy in this anymore for me? Not, ‘I’m clinically depressed’ but sort of, ‘I’m just not present in my work anymore’” (P12).

In this version, the writer explicitly names “physical”, “mental” and “beyond” as they establish the relations between these three quotes for the reader.

The final example we will discuss is the use of composite narratives to illustrate your results. A composite narrative uses data from multiple interviews or observations to tell a single, elaborated story. Composite narratives are not quotations; they are constructions and, thus, offer writers a significant degree of rhetorical control. To use them effectively, writers must orient readers, explaining what the composites represent and how they are used to illustrate findings. The following paragraph illustrates how such orienting might look.
Based on the findings of the data analysis, three composite narratives were produced, one for each of the three distinct groups of participants identified: Narrative 1, ‘Alex’, a composite of the experiences of GPs who had entered an academic role immediately after completion of GP training, having decided that they did not want a full-time clinical post; Narrative 2, ‘Robin’, a synthesis of the experiences of GPs who entered an academic role mid-career, having been a GP partner, with an interest in education or research; and Narrative 3, ‘Jo’, synthesising the experiences of GPs who entered academia mid to late career, looking for an alternative to clinical practice to run in parallel to clinical work. Gender-neutral names were assigned to these narratives, reflecting that the experiences crossed self-identified gender categories. The findings are illustrated with excerpts from the composite narratives. (McElhinney & Kennedy, 2021, p. 3)

According to Willis (2019), composite narratives offer three main advantages: they present complex, situated accounts rather than atomistic categories or themes; they ensure anonymity; and they may maximise the utility and accessibility of qualitative findings, particularly for readers outside academia. Their main limitation relates to authenticity—the writer must ensure that the composite is faithful to the tone and content of the primary data and should follow appropriate procedures for creating their composite narrative. For writers interested in trying a composite case to illustrate their results, Apramian et al. (2015) and Pack et al. (2020) demonstrate two different ways of employing this approach.

An acknowledgement of complexity

We have offered three principles to help guide the writing of an effective qualitative results section: storytelling, authenticity and argument. These principles should not be viewed as static rules. A number of factors influence how they might be applied. Research methodology matters; for example, narrative inquiry, constructivist grounded theory and critical discourse analysis will look—and sound—distinct. The journal also matters. Many have author guidelines you should consult to understand how to adapt these principles successfully. Finally, history matters. Conventions in our field are changing over time as qualitative research gains legitimacy. Just as methodological terms are shifting (Varpio et al., 2017), so too are conventions for presenting results. Looking back at our papers in the writing of this manuscript, we realised shifts in our own approaches. For instance, we rarely use tables enumerating the number of instances of each thematic category (Lingard, 2004) anymore, but that was commonplace 20 years ago, as were inter-rater reliability coefficients for multiple researchers involved in coding data. So use these principles as a guide, and stay attentive to your rhetorical situation as you work to craft a compelling qualitative results section.
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