Qualitative Research: Analysis

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Margaret R. Roller MA

Research Design Review – www.researchdesignreview.com– is a blog first published in November 2009. RDR currently consists of more than 220 articles and has 650+ subscribers along with nearly 780,000 views. As in recent years, many of the articles published in 2019 centered on qualitative research. This paper includes four articles pertaining to qualitative data analysis. These articles cover a range of topics including: considerations when defining the unit of analysis; a discussion on handling "gaps" in the data; a cautionary perspective on coding, i.e., reminding researchers that an overemphasis on coding may miss the true intention of qualitative data analysis; and a look at a Total Quality Framework approach to the qualitative content analysis method.

A separate paper representing a compilation of 14 2019 RDR articles on design and methods can be found here.

www.rollerresearch.com

rmr@rollerresearch.com

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Qualitative Data Analysis: The Unit of Analysis

The following is a modified excerpt from Applied Qualitative Research Design: A Total Quality Framework Approach (Roller & Lavrakas, 2015, pp. 262-263).

As discussed in two earlier articles in *Research Design Review* (see "The Important Role of 'Buckets' in Qualitative Data Analysis" and "Finding Connections & Making Sense of Qualitative Data"), the selection of the unit of analysis is one of the first steps in the qualitative data analysis process. The "unit of analysis" refers to the portion of content that will be the basis for decisions made during the development of codes. For example, in textual content analyses, the unit of analysis may be at the level of a word, a sentence (Milne & Adler, 1999), a paragraph, an article or chapter, an entire edition or volume, a complete response to an interview question, entire diaries from research participants, or some other level of text. The unit of analysis may not be defined by the content per se but rather by a characteristic of the content originator (e.g., person's age), or the unit of analysis might be at the individual level with, for example, each participant in an in-depth interview (IDI) study treated as a case. Whatever the unit of analysis, the researcher will make coding decisions based on various elements of the content, including length, complexity, manifest meanings, and latent meanings based on such nebulous variables as the person's tone or manner.

Deciding on the unit of analysis is a very important decision because it guides the development of codes as well as the coding process. If a weak unit of analysis is chosen, one of two outcomes may result: 1) If the unit chosen is too precise (i.e., at too much of a micro-level than what is actually needed), the researcher will set in motion an analysis that may miss important contextual information and may require more time and cost than if a broader unit of analysis had been chosen. An example of a too-precise unit of analysis might be small elements of content such as individual words. 2) If the unit chosen is too imprecise (i.e., at a very high macro-level), important connections and contextual meanings in the content at smaller (individual) units may be missed, leading to erroneous categorization and interpretation of the data. An example of a too-imprecise unit of analysis might be the entire set of diaries written by 25 participants in an IDI research study, or all of the comments made by teenagers on an online support forum. Keep in mind, however, that what is deemed too precise or imprecise will vary across qualitative studies, making it difficult to prescribe the "right" solution for all situations.

Although there is no perfect prescription for every study, it is generally understood that researchers should strive for a unit of analysis that retains the context necessary to derive meaning from the data. For this reason, and if all other things are equal, the qualitative researcher should probably err on the side of using a broader, more contextually based unit of analysis rather than a narrowly focused level of analysis (e.g., sentences). This does not mean that supra-macro-level units, such as the entire set of transcripts from an IDI study, are appropriate; and, to the contrary, these very imprecise units, which will obscure meanings and nuances at the individual level, should be

avoided. It does mean, however, that units of analysis defined as the entirety of a research interview or focus group discussion are more likely to provide the researcher with contextual entities by which reasonable and valid meanings can be obtained and analyzed across all cases.

In the end, the researcher needs to consider the particular circumstances of the study and define the unit of analysis keeping in mind that broad, contextually rich units of analysis — maintained throughout coding, category and theme development, and interpretation — are crucial to deriving meaning in qualitative data and ensuring the integrity of research outcomes.

Milne, M. J., & Adler, R. W. (1999). Exploring the reliability of social and environmental disclosures content analysis. *Accounting, Auditing & Accountability Journal*, *12*(2), 237–256.

Image captured from: http://www.picklejarcommunications.com

Qualitative Data Processing: Minding the Knowledge Gaps

The following is a modified excerpt from Applied Qualitative Research Design: A Total Quality Framework Approach (Roller & Lavrakas, 2015, pp. 34-37).

Once all the data for a qualitative study have been created and gathered, they are rarely ready to be analyzed without further analytic work of some nature being done. At this stage the researcher is working with preliminary data from a collective dataset that most often must be processed in any number of ways before "sense making" can begin.

For example, it may happen that after the data collection stage has been completed in a qualitative research study, the researcher finds that some of the information that was to be gathered from one or more participants is missing. In a focus group study, for instance, the moderator may have forgotten to ask participants in one group discussion to address a particular construct of importance—such as, the feeling of isolation among newly diagnosed cancer patients. Or, in a content analysis, a coder may have failed to code an attribute in an element of the content that should have been coded.

In these cases, and following from a Total Quality Framework (TQF) perspective, the researcher has the responsibility to actively decide whether or not to go back and fill in the gap in the data when that is possible. Regardless of what decision the researcher makes about these potential problems that are discovered during the data processing stage, the researcher working from the TQF perspective should keep these issues in mind when the analyses and interpretations of the findings are conducted and when the findings and recommendations are disseminated.

It should also be noted that the researcher has the opportunity to mind these gaps during the data collection process itself by continually monitoring interviews or group discussions. As discussed in this *Research Design Review* article, the researcher should continually review the quality of completions by addressing such questions as Did every interview cover every question or issue important to the research? and Did all interviewees provide clear, unambiguous answers to key questions or issues? In doing so, the researcher has mitigated the potential problem of knowledge gaps in the final data.

Image captured from: https://modernpumpingtoday.com/bridging-the-knowledge-gap-part-1-of-2/

The Qualitative Analysis Trap (or, Coding Until Blue in the Face)

There is a trap that is easy to fall into when conducting a thematic-style analysis of qualitative data. The trap revolves around coding and, specifically, the idea that after a general familiarization with the in-depth interview or focus group discussion content the researcher pores over the data scrupulously looking for anything deemed worthy of a code. If you think this process is daunting for the seasoned analyst who has categorized and themed many qualitative data sets, consider the newly initiated graduate student who is learning the process for the first time.

Recent dialog on social media suggests that graduate students, in particular, are susceptible to falling into the qualitative analysis trap, i.e., the belief that a well done analysis hinges on developing lots of codes and coding, coding, coding until…well, until the analyst is blue in the face. This is evident by overheard comments such as "I thought I finished coding but every day I am finding new content to code" and "My head is buzzing with all the possible directions for themes."

Coding of course misses the point. The point of qualitative analysis is not to deconstruct the interview or discussion data into bits and pieces, i.e., codes, but rather to define the research question from participants' perspectives and derive underlying themes that connect these perspectives and give weight to the researcher's interpretations and implications associated with the research question under investigation.

To do that, the researcher benefits from an approach where the focus is not as much on coding as it is on "living the data" from each participant's point of view. With this in mind, the researcher (the interviewer or moderator) begins by taking time after each interview or discussion to record key takeaways and reflections; followed by a complete immersion into each interview or discussion (from the audio/video recording and/or text transcript) to understand the participant's nuanced and intended meaning. A complete absorption (understanding) of each interview or discussion prior to code development allows the researcher to fully internalize each participant's relationship to the research question, taking into consideration that: 1) not everything a participant says has equal value (e.g., a "side conversation" between the interviewer and participant on a different topic, an inappropriate use of words that the participant subsequently redefines); 2) participants may contradict themselves or change their mind during the interview/discussion which is clarified with help from the interviewer/moderator to establish the participant's intended meaning; and 3) the tone or emotion expressed by the participant conveys meaning and is taken into account to aid in the researcher's understanding.

This big picture sets the stage for code development and the coding of content. But now coding is

less about the deconstruction of interview or discussion data and more about ensuring that each participant's lived experience related to the research question is intact and not lying unconscious in the qualitative analysis trap. Coding is simply a tool. A good thing to remember the next time you begin to feel blue in the face.

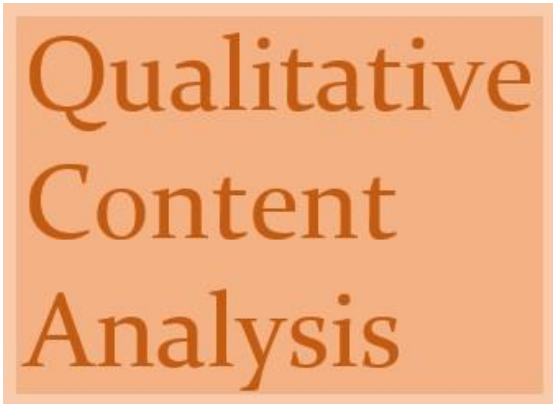
Image captured from: http://learningadvancedenglish.blogspot.com/2016/04/until-you-are-blue-in-face.html

A Quality Approach to Qualitative Content Analysis

The following includes excerpts from Section 1 and Section 4 in "A Quality Approach to Qualitative Content Analysis: Similarities and Differences Compared to Other Qualitative Methods" Forum Qualitative Sozialforschung / Forum: Qualitative Social Research, 20(3), Art. 31. The Table of Contents for the entire FQS special issue on qualitative content analysis can be found here.

1. Introduction

Scholarly discourse about what it means to collect and analyze qualitative data is a dynamic discussion in the qualitative community. At the center of this discourse is the shared understanding that qualitative research involves the examination of nuanced connections, along with the social and contextual dimensions, that give meaning to qualitative data. Qualitative researchers strive to discover these nuanced connections and contextual dimensions with all methods, and most assuredly with qualitative content analysis (QCA) (ELO & KYNGÄS, 2008; GRANEHEIM & LUNDMAN, 2004; HSIEH & SHANNON, 2005; LATTER, YERRELL, RYCROFT-MALONE & SHAW, 2000; SCHREIER, 2012; TOWNSEND, AMARSI, BACKMAN, COX & LI, 2011). Yet, in every instance, qualitative researchers are presented with the challenge of conceptualizing and implementing research designs that result in rich contextual data, while also incorporating principles of quality research to maximize the discovery of valid interpretations that lead to the ultimate usefulness (i.e., the "so what?") of their research.



In this article I discuss what makes QCA similar to and different from other qualitative research methods from the standpoint of a quality approach. In order to establish the basis from which quality concerns can be discussed, I begin with defining the QCA method (Section 2) and, in so doing, identifying the fundamental similarities and differences between QCA and other methods (Section 3) from the perspective of the ten unique attributes of qualitative research (ROLLER & LAVRAKAS, 2015). With this as a foundation, I continue with a brief contextual discussion of a quality approach to qualitative research and the QCA method (Section 4), followed by an introduction to one such approach, i.e., the total quality framework (TQF) (ibid.), in which I give researchers a way to think about quality design throughout each phase of the qualitative research process (Section 5). With these preparatory sections—defining and contrasting the QCA method with other qualitative methods, discussing quality approaches, and a brief description of the TQF approach—I lay the necessary groundwork for a meaningful discussion of the similarities and differences when adapting the TQF to the QCA method, which is my focus with this article (Section 6).

4. A Quality Approach

A quality approach specific to the QCA method—as opposed to a quality orientation within the quantitative paradigm (KRIPPENDORFF, 2013)—has been put forth by a number of researchers. For instance, GRANEHEIM and LUNDMAN (2004) discuss the trustworthiness of QCA research, leaning on the familiar concepts of credibility, dependability, and transferability made popular by

LINCOLN and GUBA (1985). Similarly, ZHANG and WILDEMUTH (2009) discuss the trustworthiness of the QCA method as defined by LINCOLN and GUBA (1985) and include the fourth criterion of confirmability. And, as a final example of how researchers have employed quality standards to the QCA method, FORMAN and DAMSCHRODER (2008) focus on issues of credibility, validity, and reliability throughout a QCA study, e.g., how memos add credibility to the research, how team coding establishes content validity as well as coding reliability, and how the examination and reporting of "negative cases" instills credibility in the findings.

With a few exceptions, a discussion of a quality approach to the QCA method as a way to think about and incorporate quality principles *at each phase* of the research process has been lacking in the literature. ELO et al. (2014), for example, offer a checklist to improve the trustworthiness of a QCA study at each of three phases, i.e., the preparation, organization, and reporting phases. Also, in his discussion of the internal quality standards associated with qualitative text analysis, KUCKARTZ (2014) outlines essential questions covering a broad scope of the research process, including the selection of method, coding, category development, consideration of outliers (i.e., "any unusual or abnormal cases," p.154), and justification of the conclusions.

By considering quality standards at each step in the research design, the researcher acknowledges that a quality qualitative research design is only "as strong as its weakest link"; meaning, for example, that a deliberate quality approach to data collection and analysis yet a failure to write a quality transparent final document, effectively masks the integrity of the research and undermines its ultimate value. A holistic quality-centric approach to qualitative research design and, specifically to the QCA method, is my focus in this article. This approach—the total quality framework (ROLLER & LAVRAKAS, 2015)—is introduced and discussed in the remaining sections, with particular attention paid to the similarities and differences between QCA and other qualitative methods when applying this framework.

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