

# Critical Thinking in Qualitative Research

9 Articles on

How Critical Thinking Skills Bring Integrity to  
Qualitative Research Design & Methods

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The contents of this compilation include a selection of 9 articles appearing in *Research Design Review* from 2017-2025 emphasizing the essential role that critical thinking — from the human mind — plays in the quality and integrity of qualitative research. These articles represent a small sampling of the articles in *RDR* devoted to research integrity and a quality approach to qualitative research design and methods. Excerpts and links may be used, provided that the proper citation is given.

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# Unbound From Mechanical Solutions: Multidimensional Critical Thinking in Qualitative Research



A quality and ethical approach to qualitative research is grounded in multidimensional critical thinking. Over the years, this reality has been discussed at great length in *Research Design Review*. In one way or the other, these discussions have cast a spotlight on the idea that the integrity of qualitative research outcomes, along with researchers' ethical commitments to participants, are built from a multifaceted immersion in the

qualitative approach that is unbound from a mechanical process.

The use of transcripts is one example. In **“The Limitations of Transcripts: It is Time to Talk About the Elephant in the Room,”** the discussion is on the built-in limitations of transcripts, including

*“the effect of distancing the researcher from the reality — so quickly lost — of an in-depth interview or group discussion. It is simply not possible to honestly imitate the participant-researcher relationship and co-constructed nature of qualitative research by way of a textual approach.”*

This is why “a thoughtful [qualitative] analysis will draw on more than [what] is contained in any written transcript” and indeed “reification of verbatim transcripts can be an impediment to critical thinking” (Barbour, 2014, p. 499).

There is so much more to learn beyond transcripts. A multidimensional critical thinking process embraces the **unique attributes of qualitative research**, the importance of context and meaning, and the far-reaching impact of the **participant-researcher relationship**. This relationship — whereby the “researchers and participants co-construct data” (Thornberg & Charmaz, 2014, p. 154) — require the researcher to give thoughtful reflection on what was said and not said: How did I influence what I think I learned? What were the contextual inputs that shaped what was learned? What connections can I make between non-obvious yet related ideas? It is these thought-provoking questions, and others from the researcher’s **reflexive journal**, that stimulate critical thinking ensuring the integrity of the outcomes.

Needless to say, multidimensional critical thinking is in sharp contrast to a mechanical approach to analysis and interpretation. As stated by Braun & Clarke (2021), “the analytic process involves immersion in the data, reading, reflecting, questioning, imagining, wondering, writing, retreating, returning. It is far from mechanical” (p. 332). And indeed,

*“One of the biggest dangers for qualitative researchers is that, when they begin to make interpretations about causes, consequences, and relationships, they fall back on the linear assumptions of quantitative analysis and begin to specify isolated variables that are mechanically linked together out of context.” (Patton, 1990, p. 423)*

So, what does all of this have to do with ethics? Qualitative researchers utilize determined and ingenious ways to recruit participants. Once recruited, and having gained participants’ consent, researchers owe their participants a multidimensional critical thinking approach to analysis, ensuring that each participant’s contribution to the research is fully incorporated. This is discussed as “fairness” in **“Exploring Human Realities: A Quality & Fair Approach.”**

*“A quality approach to qualitative research fosters the essential element of fairness while maximizing the ultimate usefulness of the research. Fairness means giving participants a fair voice in the research. A ‘fair voice’ is not a small q positivist-Big Q non-positivist issue (see Braun & Clarke, 2022) but rather the researcher’s quality approach to data collection and analysis that gives careful consideration to the scope of the sample design, researchers’ skills that prioritize inclusion, ongoing **reflexivity**, and other quality research strategies that embrace diversity in our participants and our methods.”*

The issue of fairness takes on a special meaning when participants are drawn from at-risk or marginalized segments of the population. By way of multidimensional critical thinking, qualitative researchers are able to meet their commitment to the most vulnerable, for example

*“...reflection takes on new meaning when our participants are those with the weakest voice. As we sit down with our reflexive journal and consider our prejudices and subjectivities...researchers might do well to pay particular attention to their assumptions and beliefs — What assumptions did I make about the participant(s)? and How did my personal values, beliefs, life story, and/or social/economic status affect or shape: the questions I asked, the interjections I made, my listening skills, and/or my behavior?” (from **“Giving Voice: Reflexivity in Qualitative Research”**)*

As stated by Donna Mertens (2014),

“Researchers have an ethical obligation to give serious consideration to what they are giving back to members of the communities in which they work. Reciprocity can take many forms; simply giving voice is a first step” (p. 521).

And qualitative researchers can only give that voice to the extent that they unbind themselves from mechanical or formulaic solutions and instead embrace a multidimensional critical thinking approach that maintains respect for each research participant while furthering the course to impactful outcomes.

Barbour, R. S. (2014). Quality of data analysis. *The SAGE handbook of qualitative data analysis*, 496-509.

Braun, V., & Clarke, V. (2021). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*, 18(3), 328–352.  
<https://doi.org/10.1080/14780887.2020.1769238>

Braun, V., & Clarke, V. (2022). Toward good practice in thematic analysis: Avoiding common problems and be(com)ing a knowing researcher. *International Journal of Transgender Health*.  
<https://doi.org/10.1080/26895269.2022.2129597>

Mertens, D. M. (2014). Ethical use of qualitative data and findings. *The SAGE handbook of qualitative data analysis*, 510-523.

Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Thousand Oaks, CA: Sage.

Thornberg, R., & Charmaz, K. (2014). Grounded theory and theoretical coding. *The SAGE handbook of qualitative data analysis*, 5(2014), 153-69.

# Critical Thinking in Qualitative Research Design

The following is a modified excerpt from *Applied Qualitative Research Design: A Total Quality Framework Approach* (Roller & Lavrakas, 2015, pp. 20-21).

Many researchers and scholars have advanced strategies, criteria, or frameworks for thinking about and promoting the importance of “the quality” of qualitative research at some stage in the research design. One such strategy is the **framework developed by Levitt et al. (2017)** that centers on methodological integrity. Another is the Total Quality Framework (TQF)



which has been discussed throughout *Research Design Review*, as in the article titled **“The ‘Quality’ in Qualitative Research Debate & the Total Quality Framework.”**

The strategies or ways of thinking about quality in qualitative research that are most relevant to the TQF are those that are (a) paradigm neutral, (b) flexible (i.e., do not adhere to a defined method), and (c) applicable to all phases of the research process. Among these, the work of Lincoln and Guba (e.g., 1981, 1985, 1986, and 1995) is the most noteworthy. Although they profess a paradigm orientation “of the constructionist camp, loosely defined” (Lincoln et al., 2011, p. 116), the quality criteria Lincoln and Guba set forth nearly 30 years ago is particularly pertinent to the TQF in that it advances the concept of trustworthiness as a major criterion for judging whether a qualitative research study is “rigorous.” In their model, trustworthiness addresses the issue of “How can a [qualitative researcher] persuade [someone] that the findings of a [study] are worth paying attention to, worth taking account of?” (Lincoln & Guba, 1985, p. 290). That is, what are the criteria upon which such an assessment should be based? In this way, Lincoln and Guba espouse standards that are flexible (i.e., can be adapted depending on the research context) as well as relevant throughout the research process.

In answering, they put forth the criteria of credibility, transferability, dependability, and confirmability. For Lincoln and Guba (1985), credibility is the extent to which the findings of a qualitative research study are internally valid (i.e., accurate). Credibility is established through (a) prolonged engagement, (b) persistent observation, (c) triangulation, (d) peer debriefings, (e) negative case analysis, (f) referential adequacy, and (g) member checks. Transferability refers to the extent to which other researchers or users of the research can determine the applicability of the research design and/or the study findings to other research contexts (e.g., other participants, places, and times).

Transferability is primarily established through thick description that is “necessary to enable someone interested in making a transfer to reach a conclusion about whether transfer can be contemplated as a possibility” (Lincoln & Guba, 1985, p. 316). Thick description and transferability are key elements of the TQF Transparency component.

Dependability is the degree to which an independent “auditor” can look at the qualitative research process and determine its “acceptability” and, in so doing, create an audit trail of the process. To that end, the **Transparency component of the TQF** deals directly with the idea of providing the user of the research with an audit trail pertaining to all aspects of the research in the final research document. Confirmability refers to utilizing the same dependability audit to examine the evidence in the data that purportedly supports the researcher’s findings, interpretations, and recommendations.

Regardless of the quality framework researchers use, **the important objective is to stretch researchers’ understanding of how design decisions impact the integrity of qualitative data. By developing critical thinking skills, researchers ensure a quality approach that ultimately delivers useful outcomes to the users of the research.**

Guba, E. G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Communication and Technology Journal*, 29(2), 75–91.

Levitt, H. M., Motulsky, S. L., Wertz, F. J., Morrow, S. L., & Ponterotto, J. G. (2017). Recommendations for designing and reviewing qualitative research in psychology: Promoting methodological integrity. *Qualitative Psychology*, 4(1), 2–22. <https://doi.org/10.1037/qup0000082>

Lincoln, Y. S. (1995). Emerging criteria for quality in qualitative and interpretive research. *Qualitative Inquiry*, 1(3), 275–289. <https://doi.org/10.1177/107780049500100301>

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage Publications.

Lincoln, Y. S., & Guba, E. G. (1986). But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. *New Directions for Program Evaluation*, 30(1), 73–84.

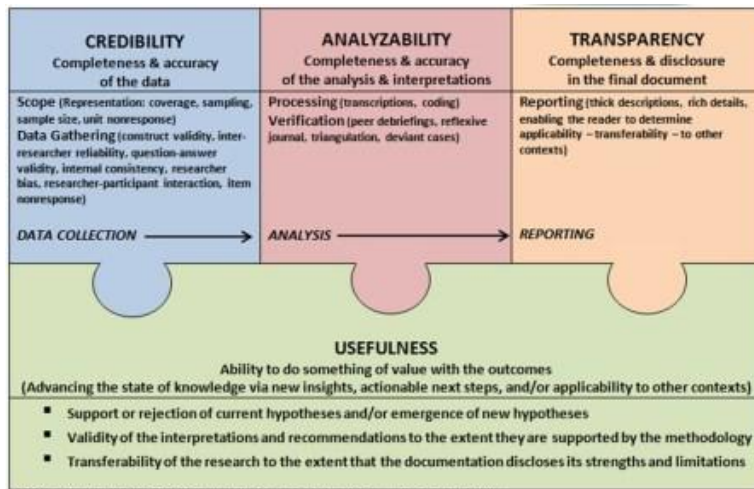
Lincoln, Y. S., Lynham, S. A., & Guba, E. G. (2011). Paradigmatic controversies, contradictions, and emerging confluences, revisited. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (pp. 97–128). Sage Publications.

Roller, M. R., & Lavrakas, P. J. (2015). *Applied qualitative research design: A total quality framework approach*. New York: Guilford Press.

Image captured from: <https://www.wabisabilearning.com/blog/critical-thinking-questions-subject>

# The “Quality” in Qualitative Research Debate & the Total Quality Framework

The following is a modified excerpt from *Applied Qualitative Research Design: A Total Quality Framework Approach* (Roller & Lavrakas, 2015, pp.15-17).



Roller, M. R., & Lavrakas, P. J. (2015). *Applied qualitative research design: A total quality framework approach*. New York: Guilford Press.

The field of qualitative research has paid considerable attention in the past half century to the issue of research “quality.” Despite these efforts, there remains a lack of agreement among qualitative researchers about how quality should be defined and how it should be evaluated (cf. Lincoln & Guba, 1985, 1986; Lincoln, 1995; Morse et al., 2002; Reynolds et al., 2011; Rolfe, 2006; Schwandt, Lincoln, & Guba, 2007). Some who

seem to question whether quality can be defined and evaluated appear to hold the view that each qualitative research is so singularly unique in terms of how the data are created and how sense is made of these data that striving to assess quality is a wasted effort that never leads to a satisfying outcome about which agreement can be reached. Among other things, this suggests that validity – meaning, “the correctness or credibility of a description, conclusion, explanation, interpretation, or other sort of account” (Maxwell, 2013, p. 122) – is solely in the eye of the beholder and that convincing someone else that a qualitative study has generated valid and actionable findings is more an effort of subjective persuasion than an effort of applying dispassionate logic to whether the methods that were used to gather and analyze the data led to “valid enough” conclusions for the purpose(s) to which they were meant to serve.

Controversy also exists about how to determine the quality of a qualitative study. Arguments are made by some that the quality of a qualitative study is determined solely by the methods and processing that the researchers have used to conduct their studies. Others argue that quality is determined essentially by how consumers of the study judge it (see Morse et al., 2002; Reynolds et al., 2011).

It is within this context of disharmony and controversy that the Total Quality Framework (TQF) was developed. **The TQF was designed as a way for qualitative researchers to develop critical thinking skills to apply in designing, conducting, and interpreting**

**their research** so that the studies are more likely to (a) gather high-quality data, (b) lead to more robust and valid interpretations of the data, and (c) ultimately generate highly useful outcomes. [\*See below for links to articles on each of the four components of the TQF.]

The TQF also provides a guide for anyone who is consuming the findings and recommendations from a qualitative research study. As such, the TQF helps users of the research form a sense of confidence about the validity and usefulness of the study's findings. The intention is not that applying the TQF will yield a dichotomous (i.e., thumbs-up vs. thumbs-down) judgment that a qualitative study is valid or not valid, useful or not useful. Rather, the TQF is intended to help the consumers of a given research study to form a sense of confidence that may range from "not at all confident" to "extremely confident" about the study's validity and usefulness. In this way, the TQF empowers the users of the research to make their own decisions about how much importance should be placed on a qualitative study's findings.

In sum, the TQF offers a comprehensive and interrelated way of thinking critically about the major threats that can undermine the value of a qualitative research study at each phase of the research process. It is valuable to qualitative researchers who are designing a study, who are conducting a study, or who are interpreting a study. The TQF is meant to empower anyone interested in applying it to formulate their own conclusions about the validity and therefore usefulness of a qualitative research study.

\* Articles discussing the TQF components can be found by clicking [Credibility](#), [Analyzability](#), [Transparency](#), [Usefulness](#).

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage Publications.

Lincoln, Y. S., & Guba, E. G. (1986). But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. *New Directions for Program Evaluation*, 30(1), 73–84.

Lincoln, Y. S. (1995). Emerging criteria for quality in qualitative and interpretive research. *Qualitative Inquiry*, 1(3), 275–289.

Maxwell, J. A. (2013). *Qualitative research design: An interactive approach* (3rd ed.). Thousand Oaks, CA: Sage Publications.

Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods*, 1(2), 13–22.

Reynolds, J., Kizito, J., Ezumah, N., Mangesho, P., Allen, E., & Chandler, C. (2011). Quality assurance of qualitative research: A review of the discourse. *Health Research Policy and Systems, 9*(1), 43.

Rolfe, G. (2006). Validity, trustworthiness and rigour: Quality and the idea of qualitative research. *Journal of Advanced Nursing, 53*(3), 304–310.

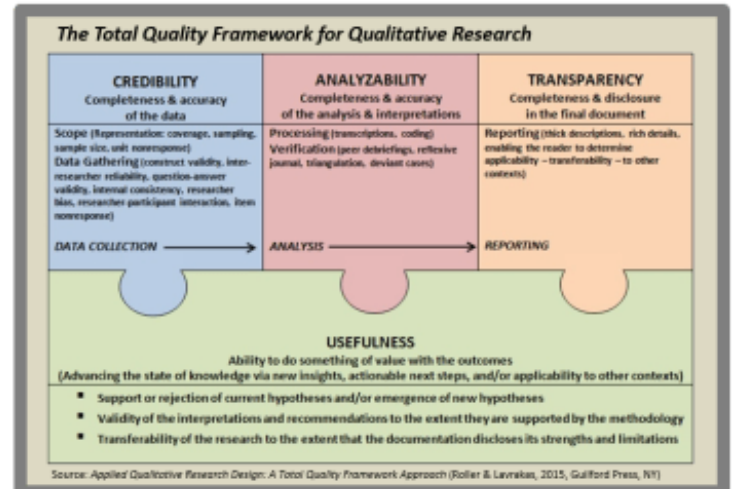
Schwandt, T. A., Lincoln, Y. S., & Guba, E. G. (2007). Judging interpretations: But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. *New Directions for Evaluation, 114*, 11–25.

# Elevating Qualitative Design to Maximize Research Integrity

The following is a modified excerpt from *Applied Qualitative Research Design: A Total Quality Framework Approach* (Roller & Lavrakas, 2015, pp. 9-10).

All research that is aimed at understanding how people think and behave requires a principled approach to research design that is likely to maximize data quality and to instill users' confidence in the research outcomes. This is no less so in qualitative than it is in quantitative research; and, in fact, the **distinctive attributes and underlying complexities in qualitative research** necessitate a quality approach to qualitative research design. This approach requires qualitative researchers to build certain principles into their research studies by way of incorporating and practicing fundamental research standards.

To that end, the **Total Quality Framework** (TQF) was devised to provide a basis by which researchers can develop critical thinking skills necessary to the execution of qualitative designs that maximize the integrity of the research outcomes. This framework is *not intended to prescribe a formula* or specific procedure by which qualitative researchers should conduct qualitative inquiry. Rather, **the TQF provides researchers with a flexible way to focus on quality issues, examine the sources of variability and possible bias in their qualitative methods, and incorporate features into their designs that mitigate these effects and maximize quality outcomes.** Integral to the TQF is the idea that all qualitative research must be **Credible**, **Analyzable**, **Transparent**, and **Useful**. These four components are fundamental to the TQF and its ability to help researchers identify the strengths and limitations of their qualitative methods while also guiding them in the qualitative research design process.



By holding the quality of qualitative research design to a deep level of scrutiny when applied across the diverse, multidisciplinary fields utilizing qualitative methods — e.g., education; psychology; anthropology; sociology; nursing, public health, and medicine;

communication; information management; business; geography and environmental science; and program evaluation — the discussion of qualitative research is significantly elevated and enables students, faculty, and practitioners to design and interpret qualitative research studies based on the quality standards that are the hallmark of the TQF.

Roller, M. R., & Lavrakas, P. J. (2015). *Applied qualitative research design: A total quality framework approach*. New York: Guilford Press.

# Exploring Human Realities: A Quality & Fair Approach

*The following incorporates modified excerpts from [Applied Qualitative Research Design: A Total Quality Framework Approach](#) (Roller & Lavrakas, 2015, pp. 2-3).*

Quality  
Fairness

As the channel by which researchers explore the depths of human realities, qualitative research has gained prominent status that is accelerating over time as quantitatively trained mentors in academia are increasingly asked to assist in students' qualitative research designs, and as the volume of

published works in qualitative research aggressively grows (cf. Charmaz, 2008; Lincoln, Lynham, & Guba, 2011; Silverman, 2013). Even psychology, a discipline that has traditionally dismissed qualitative research as “subjective” and “unscientific,” has come of age with slow but continued growth in the field of qualitative psychology (cf. Wertz, 2014). These advances have given rise to a vibrant array of scholars and practitioners who harbor varying perspectives on how to approach qualitative research.

These differing perspectives are best exemplified by the **paradigm debates** among qualitative researchers. The focus of these debates is on the underlying belief or orientation the researcher brings to any given qualitative study. In particular, these discussions center on philosophical constructs related to the nature of reality (ontology) and that of knowledge (epistemology). It is the researchers' sometimes divergent views on the presence and extent of a “true” reality—for example, whether it is the (post)positivism view that there is a single objective reality that can be found in a controlled scientific method, or the constructivism–interpretivism paradigm that emphasizes the idea of multiple realities existing in the context of social interactions and subjective meanings—as well as the source of this knowledge—for example, the dominant role of the researcher in **critical theory**—that have fueled an ongoing dialogue concerning paradigms within the qualitative research arena.

And yet, regardless of the philosophical or theoretical paradigms that may guide researchers in their qualitative inquiries, qualitative researchers are united in the fundamental and common goal of unraveling the convoluted and intricate world of the human experience.

The complexities of the human experience present unique challenges to qualitative researchers who strive to develop research designs that result in contextual data while

incorporating basic standards of good research. To that end, many qualitative researchers, routinely focus their attention on the importance of methodically rigorous data collection practices and verification checks (Creswell, 2013; Marshall & Rossman, 2011; Morse, Barrett, Mayan, Olson, & Spiers, 2002); well-thought-out procedures and analytic rigor (Atkinson & Delamont, 2006; Berg & Lune, 2012), and frameworks that promote critical thinking throughout the research process (Levitt, Motulsky, Wertz, Morrow, & Ponterotto, 2017; Roller & Lavrakas, 2015).

By transcending the paradigm debates, a quality approach to qualitative research fosters the essential element of fairness while maximizing the ultimate usefulness of the research. Fairness means giving participants a fair voice in the research. A “fair voice” is not a small q positivist-Big Q non-positivist issue (see Braun & Clarke, 2022) but rather **the researcher’s quality approach to data collection and analysis that gives careful consideration to the scope of the sample design, researchers’ skills that prioritize inclusion, ongoing reflexivity, and other quality research strategies that embrace diversity in our participants and our methods.**

A quality approach that promotes fairness to explore the complexity of human realities is a non-debatable goal of the qualitative researcher.

Atkinson, P., & Delamont, S. (2006). Rescuing narrative from qualitative research. *Narrative Inquiry*, 16(1), 164–172. <https://doi.org/10.1075/ni.16.1.21atk>

Berg, B. L., & Lune, H. (2012). *Qualitative research methods for the social sciences* (8th ed.). Boston: Pearson.

Braun, V., & Clarke, V. (2022). Toward good practice in thematic analysis: Avoiding common problems and be(com)ing a knowing researcher. *International Journal of Transgender Health*. <https://doi.org/10.1080/26895269.2022.2129597>

Charmaz, K. (2008). Views from the margins: Voices, silences, and suffering. *Qualitative Research in Psychology*, 5(1), 7–18. <https://doi.org/10.1080/14780880701863518>

Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: Sage Publications.

Levitt, H. M., Motulsky, S. L., Wertz, F. J., Morrow, S. L., & Ponterotto, J. G. (2017). Recommendations for designing and reviewing qualitative research in psychology: Promoting methodological integrity. *Qualitative Psychology*, 4(1), 2–22. <https://doi.org/10.1037/qup0000082>

Lincoln, Y. S., Lynham, S. A., & Guba, E. G. (2011). Paradigmatic controversies, contradictions, and emerging confluences, revisited. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (pp. 97–128). Sage Publications.

- Marshall, C., & Rossman, G. B. (2011). *Designing qualitative research*. Thousand Oaks, CA: Sage Publications.
- Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods*, *1*(2), 13–22.
- Roller, M. R., & Lavrakas, P. J. (2015). *Applied qualitative research design: A total quality framework approach*. New York: Guilford Press.
- Silverman, D. (2013). What counts as qualitative research? Some cautionary comments. *Qualitative Sociology Review*, *IX*(2), 48–55.
- Wertz, F. J. (2014). Qualitative inquiry in the history of psychology. *Qualitative Psychology*, *1*(1), 4–16.

# Qualitative Analysis: A Reflexive Exercise for Category Development

The second component of the **Total Quality Framework** (TQF) is **Analyzability**. This component provides researchers with critical thinking considerations relevant to the completeness and accuracy of their analyses and interpretations of the data. Analyzability consists of two fundamental elements — processing and verification — the first of which involves coding followed by deriving categories and themes from the data.

From a TQF perspective, a useful exercise for category development — particularly when the study entails multiple researchers and a large amount of data — is by way of the reflexive template. Although similar in spirit to the writing function in computer-assisted qualitative data analysis software (CAQDAS) programs, the primary purpose of this reflexive template is to encourage researchers to actively reflect as they go about developing **categories or buckets** defined by the underlying constructs gained from the data. By way of the template, the analyst can document the relationship they perceive between the category and the construct as well as provide an example or further input to support their thinking.

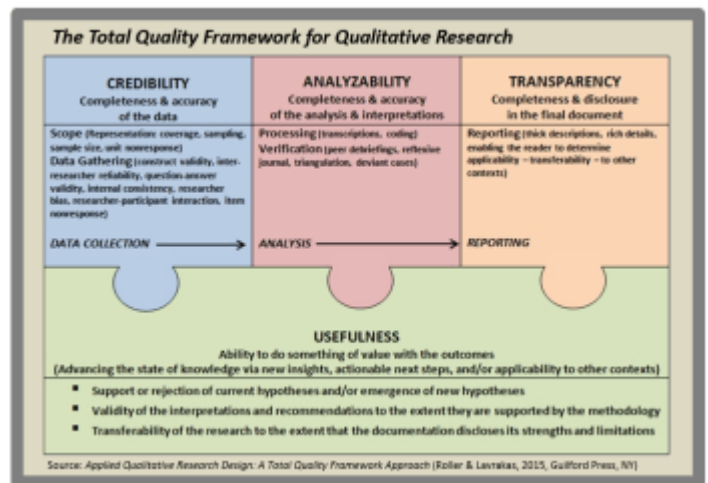
For instance, a researcher conducting a qualitative content analysis study of diaries written by women confined to prison concerning their activities and experiences during confinement, may have derived the category “educational opportunity” (EDUOPPTY) from the coded data defined in part (i.e., along with other relevant constructs) by the underlying construct “well-being.” Within the well-being construct, the researcher also identified three key subconstructs — physical well-being, mental well-being, and financial well-being — that play a central role in understanding the meaning of the well-being construct as well as deepening the definition of the EDUOPPTY category. In this example, the reflexive exercise (by way of the template, see below on page 15) has facilitated the researcher’s ability to record the connections between the category and key constructs — highlighting instances of the relationship between EDUOPPTY (e.g., how to use the exercise equipment and art classes) and physical well-being, mental well-being, as well as financial well-being — while aiding collaboration with the research team and adding **transparency** to the analysis process.

Reflexive Template for Category Development			
Category	Key Construct	Relationship Between Category & Construct	Example/Additional Feedback
EDUOPPTY	Physical well-being	I am seeing a lot of examples where the classes on how to use the exercise equipment are perceived as educational as well as giving women a workout and making them feel physically stronger.	"The weekly classes in the gym on how to use and operate the equipment (like the elliptical machine) have shaped me up which makes me feel like my body is not totally going to waste."
EDUOPPTY	Mental well-being	There is a lot of overlap in the physical and mental well-being associated with the classes on how to use the exercise equipment in the gym. Mentally, it makes women feel like they are learning a new skill, keeping their minds sharp.	I see most of the comments pertaining to positive mental well-being from the exercise-equipment classes coming from the women who have been at the facility for a long time (more than five years).
EDUOPPTY	Financial well-being	The educational opportunities at the facility seem to give many women confidence that they can do something productive when they are released from prison and provide themselves with an income.	"I wonder how much I could sell my art for if I continued drawing when I leave here."  "I have learned so much about how to properly use the exercise equipment, I am thinking about applying for a job at the fitness center when I'm released."

Adapted from: Roller, M. R., & Lavrakas, P. J. (2015). Applied qualitative research design: A total quality framework approach. New York: Guilford Press.

# Using the TQF to Assess Research Limitations: A Case Example

The **Total Quality Framework** (TQF) has been discussed many times in *Research Design Review*. Typically, the discussions center around: applying a quality approach to different aspects of qualitative research design such as **sample design** or a quality approach to different research methods such as **qualitative content analysis**, or an explanation of one of the four components of the TQF — **Credibility**, **Analyzability**, **Transparency**, **Usefulness** — or the TQF approach to the **qualitative research proposal**. Although there have been a few articles on the limitations of qualitative methods and modes from a TQF perspective such as **“Limitations of the Focus Group Method: An Overview,”** there has not been an explicit discussion of utilizing the TQF to examine the limitations of a particular research study.



Luke David Bevan, a doctoral graduate of University College London, wrote a compelling thesis on **“Through a Model, Darkly: An Investigation of Modellers’ Conceptualisation of Uncertainty in Climate and Energy Systems Modelling and an Application to Epidemiology.”** This study set out “to understand how [computer modellers in climate science and energy systems] conceptualise the uncertainty of their work.” To this end, Dr. Bevan conducted 38 semi-structured in-depth interviews with modellers. Included in this nearly 500-page doctoral thesis is a discussion on the limitations of the research study. This discussion is organized around the TQF and its four components. It does this by highlighting potential shortcomings of the research design associated with the sample and data gathering (the TQF Credibility component), data processing and verification (the TQF Analyzability component), Transparency, and the ultimate Usefulness of the research outcomes.

The following are a few brief examples of the limitations identified in Dr. Bevan’s thesis:

TQF Component	Potential Limitation
<b>Credibility</b>	
Sample	Structure of the sample, asymmetry of the number of participants
Data Gathering	Interview protocol, questions were “generally about uncertainty and not specifically about individual things that a researcher may be uncertain about”
<b>Analyzability</b>	
Processing	Transcriptions and coding, coding the relationships between concepts was difficult
Verification	Only one researcher was involved in the analysis
<b>Transparency</b>	No limitation given. The author provides thick description, interview summaries, and “extensive quotes” from participants.
<b>Usefulness</b>	“Natural omissions of fruitful areas of discussion from different interviews” due to the “wide-ranging topic” and time constraints, some concepts that surfaced in the interviews were not explored in detail

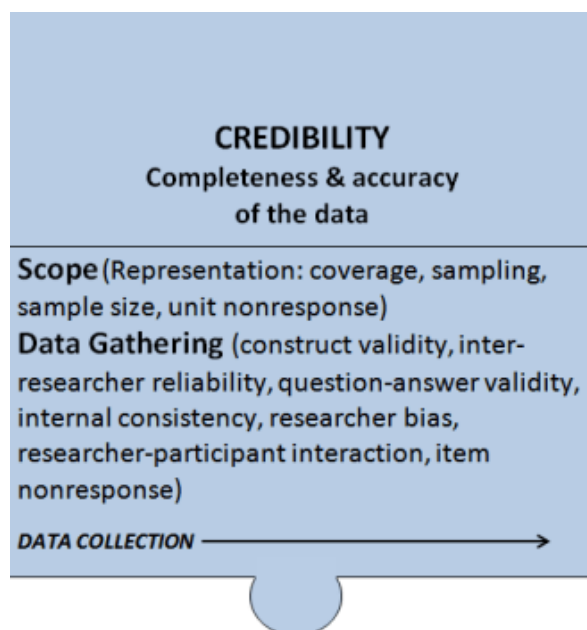
As this case example shows, the TQF is an effective and efficient facilitator for thinking critically about qualitative research design. In particular, this case reminds researchers that critical thinking skills are essential *throughout* the research process, i.e., before and during the conduct of the research as well as when reflecting back on the completed study.

Bevan, L. D. (2022). *Through a Model, Darkly: An Investigation of Modellers’ Conceptualisation of Uncertainty in Climate and Energy Systems Modelling and an Application to Epidemiology* (Doctoral dissertation, UCL (University College London)).

# Applying the TQF Credibility Component: An IDI Case Study

The **Total Quality Framework** (TQF) is an approach to qualitative research design that integrates quality principles without stifling the **fundamental and unique attributes of qualitative research**. In so doing, the TQF helps qualitative researchers develop critical thinking skills by showing them how to give explicit attention to quality issues related to conceptualization, implementation, analysis, and reporting.

The following case study offers an example of how many of the concerns of the Credibility (or data collection) component of the TQF were applied to an in-depth interview (IDI) study conducted by **Roller Research**. This case study can be read in its entirety in Roller & Lavrakas (2015, pp. 100-103).



## Scope

This study was conducted for a large provider of information services associated with nonprofit organizations based in the U.S. The purpose was to investigate the information needs among current and former users of these information services in order to facilitate the development of “cutting edge” service concepts.

Eighty-six (86) IDIs were conducted among individuals within various grant-making and philanthropic organizations (e.g., private foundations, public charities, and education institutions) who are responsible for the decision to purchase and utilize these information services.

There were two important **considerations in choosing to complete 86 interviews**: (a) the required level of analysis – it was important to be able to analyze the data by the various types of organizations, and (b) practical considerations – the available budget (how much money there was to spend on the research) and time restrictions (the research findings were to be presented at an upcoming board meeting). In terms of mode, 28 IDIs, with the largest, most complex users of these information services, were conducted in-person, while the remaining 58 interviews were conducted on the telephone.

Participants were **stratified** by type, size, and geographic location and then selected on an ***n*th-name basis** across the entire lists of users and former users provided by the research sponsor.

A high degree of **cooperation** was achieved during the recruitment process by way of:

- A preliminary letter sent to all sample members.
- Identification of the research sponsor (whose positive reputation strengthened the credibility of the research).
- A non-monetary incentive consisting of a summary of the research findings, which was highly desired by participants given their interest in knowing how others were using nonprofit information as well as others' reactions to several proposed concepts that were presented during the interviews.
- Utilizing one professional executive recruiter who was highly trained on how to gain access to and cooperation from decision makers. This recruiter shared office space with the researcher to facilitate a close interaction to discuss the scheduling needs of potential interviewees and work out ways to meet these needs to their satisfaction.
- Flexible scheduling, e.g., in-person interviewees were allowed to choose a location for the interview without restrictions, and all interviewees were permitted to select any time – day or night, weekday or weekend – for the interview.

## Data Gathering

The researcher/interviewer, with over 30 years of professional experience, developed the interview guide and completed all 86 IDIs. The **validity and accuracy** of the research results were maximized by:

- Meeting with various managers within the sponsoring organization who had a vested interest in the outcome of the research – e.g., the president and CFO as well as the directors of research, programs, and communications – in order to gain a clear understanding of the research objectives and the constructs to measure.
- Learning as much as possible about the category via websites and literature particular to competitive providers of similar nonprofit information, how organizations use this information, and background details on each of the organizations that were included in the sample.
- Reviewing and deliberating with the sponsoring organization on multiple drafts of the interview guide for both the in-person and telephone IDIs.
- Organizing the **interview guide as a “funnel,”** moving from broad to narrow topics.

- Prioritizing topics so that the issues of most importance to the research objectives were consistently discussed in every IDI – e.g., opinions concerning other types of information providers and the usability of specific features on the research sponsor’s website.
- Ensuring that each interviewee was a qualified participant. For instance, making a concerted effort during recruitment to track down the person within each organization that met all screener requirements including being the decision maker and user of nonprofit information.
- Scheduling IDIs at least two to three hours apart so the interviewer did not rush the interviews and allowed the interviewees to talk beyond the 45-minute time commitment (some in-person IDIs ran up to two hours and some telephone IDIs ran an hour or more).
- Building rapport with interviewees early in the process by way of emailing and telephoning recruited individuals to confirm the interview appointment and introduce the interviewer, along with providing contact information for the interviewee to use in order to request a change in the schedule or otherwise communicate with the interviewer. The interviewer also encouraged interviewees to ask questions about the research before, during, and after the IDI.
- Emphasizing at the onset of each interview that, even though the client was openly acknowledged as the sponsor of the research, the interviewee’s candid opinions were essential to the success of the study. The interviewer reminded interviewees that she was not affiliated with the sponsoring organization and she had no vested interest in the research outcomes beyond the quality of the data, analysis, and reporting.
- Maintaining an informal reflexive journal in which the interviewer recorded her thoughts and observations of her conduct and that of her participants.

Roller, M. R., & Lavrakas, P. J. (2015). *Applied qualitative research design: A total quality framework approach*. New York: Guilford Press.

# Making Connections: Practical Applications of the Total Quality Framework in Mixed Methods Research

The **Total Quality Framework** (TQF) (Roller & Lavrakas, 2015) offers researchers a way to think about qualitative research design from the vantage point of core principles. It is an approach that helps qualitative researchers develop critical thinking skills by giving explicit attention to the quality of the conceptualization and implementation of their qualitative studies. The TQF is composed of four components, each pertaining to a phase of the research process – data collection (**Credibility**), analysis (**Analyzability**), reporting (**Transparency**), and the ability to do something of value with the outcomes (**Usefulness**).



Qualitative research is most often conducted as a standalone study but frequently conducted in conjunction with quantitative methods. A mixed methods research (MMR) design involves collecting both qualitative and quantitative data, then *integrating or connecting* the two datasets to draw interpretations derived from the combined strengths of both sets of data (Creswell, 2015). The integration of, or making the connection between, the qualitative and quantitative components is fundamental to MMR and distinguishes it from a multi-method approach that simply utilizes different methods. In contrast, a *mixed* methods design incorporates any number of qualitative and quantitative methods (and modes) with the specific intention of blending the data in some fashion. Mixed methods research is the subject of **an earlier article** in *Research Design Review*.

So, how do we apply the TQF to a MMR design? It is not good enough to simply think of the qualitative component of MMR as a separate feature to the overall design and apply a TQF approach to the qualitative method(s). For MMR, the TQF needs to be adapted to accommodate a qualitative-quantitative connection as discussed earlier. There are many ways to do this. A few practical applications of the TQF in MMR are outlined below.

## Credibility (Data Collection)

A necessary and highly practical consideration in the course of collecting in-depth

interview data is the question of the number of interviews to complete. To address this question, the TQF presents 10 related questions\* for the researcher to contemplate when in the field, such as

- Did all interviewees provide clear, unambiguous answers to key questions or issues, or does the researcher need to go back to some interviewees for clarification?
- Can the researcher identify the sources for variation and contradictions within the data?
- Do the data confirm or deny what is already known about the subject matter?

The kinds of questions the researcher might contemplate in a MMR design are similar but are now tweaked to connect qualitative data gathering with the quantitative component. In each case, the researcher is expanding their thinking to consider the implications associated with the collecting of qualitative data *as well as* that associated with the quantitative. The researcher conducting a MMR study might now consider,

- Did all interviewees provide clear, unambiguous answers to key questions or issues; *if not, does the researcher need to go back to the participant(s) or leave clarification for the quantitative component?*
- Can the researcher identify the sources for variation and contradictions within the qualitative data *as well as between the qualitative and quantitative data?*
- Do the data confirm or deny what is known *from the quantitative data?*

### Analyzability (Analysis)

The TQF offers numerous ways to approach the processing and verification of qualitative data. One of the suggested verification strategies has to do with **reflexivity** and, specifically, the reflexive journal. The reflexive journal gives researchers the opportunity to respond to questions intended to foster introspection along with an understanding of the researcher's effect on the qualitative data. These reflections further the researcher's ability to verify the interpretations of qualitative data during the analysis process. In a standalone qualitative study, the researcher's reflexive journal might include the contemplation of such questions as\*

- What do I think I “know” from this/these participant(s) and how do I think I “know” it?
- What assumptions did I make (what did I assume to be true) about the participant(s)?
- How did my personal values, beliefs, life story, and/or social/economic status affect or shape the questions I asked, the interjections I made, my listening skills, and/or behavior?

If the researcher was conducting MMR, the reflexive journal would address similar questions but now in the context of the broader MMR scheme. To connect the qualitative component with the quantitative, the reflexive journal asks the researcher to think about

- What do I think I “know” from this/these participant(s) and *how has that been influenced by what I may know from the quantitative data?*
- What assumptions did I make (what did I assume to be true) about the participant(s) *based on what I may know about respondents to the quantitative survey?*
- How did my *understanding of the quantitative data* affect or shape the questions I asked, the interjections I made, my listening skills, and/or behavior?

### Transparency (Reporting)

The Transparency component of the TQF has to do with reporting the outcomes in the final document; specifically, reporting a “thick description” of study details (NOTE: For earlier *RDR* articles on thick description, see this [April 2017 article](#) and this [2015 article](#)). By conveying the details of the data collection and analysis processes, the researcher allows the users of the research (e.g., other researchers, the sponsor) to examine the researcher’s work and draw their own conclusions as well as transfer the design to other contexts. There are many details about the study that the researcher may want to address in the final document\*, including the

- Adequacy (i.e., comprehensiveness) of the lists that were used to represent the target population.
- Failure to interview all interviewees sampled, efforts that were made to avoid this, and possible biases or weakness this may have caused.
- Field notes (e.g., note-taking procedures, examples from the field notebook).

In MMR, the qualitative researcher needs to pay attention to connecting the qualitative component with the quantitative portion of the study. To do this in the reporting phase, the researcher interjects the thick description with details relevant to both the qualitative and the quantitative research. For example, the details might include the

- *Compatibility* of the lists with that *used in the quantitative phase*.
- Failure to interview *comparable types of people*, efforts that were made to avoid this, and possible biases or weakness this may have caused.
- Field notes (e.g., *examples when qualitative data converged/diverged with quantitative data*).

## Usefulness (Doing something of value with the outcomes)

Ultimately, the objective of our research efforts is to derive outcomes that respond to the research question and provide outcomes that serve a valuable purpose. In many instances, a MMR approach fulfills this goal more so than a standalone qualitative or quantitative study by expanding and enriching the researcher's understand beyond the "borders" of a mono-method study. The *Journal of Mixed Methods Research* and other resources are filled with examples of ways MMR has contributed to important societal issues:

### Health

- Cultural nuances among dementia caregivers, e.g., social stigma of dementia (Weitzman & Levkoff, 2000)

### Education

- Procrastination & motivation among students with learning disabilities (Klassen et al., 2008)

### Conservation

- Conservation adoption decision process among farmers, e.g., importance of communication, rapport, & incentives (Nyanga, 2012)

### Psychology

- Meaning-making underlying bereaved mothers' adaptive and complicated grief responses to the death of a child from cancer (Gerrish, et al., 2014)

### Food Safety

- Gap between knowledge & behavior (Meysenburg et al., 2014).

When adapting a quality approach to the qualitative component of MMR, it is not sufficient to simply treat the qualitative portion as an independent element in the overall MMR design. Indeed, it is critical and fundamental to the MMR approach to make a connection between the qualitative and quantitative facets of the study. The few practical examples discussed in this article illustrate how qualitative researchers can make these connections while, at the same time, maintaining the integrity of the unique epistemology underpinning qualitative inquiry.

\*See Roller & Lavrakas (2015) for a complete list of questions / thick description details.

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