

Abductive Grounded Theory: An Educational Framework for Teaching Theory Generation



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Abstract: Grounded Theory is one of the most widely taught qualitative research methodologies in doctoral education and is commonly presented as an inductive approach to theory generation. While this emphasis has provided researchers with valuable analytical procedures, comparatively little explicit attention has been devoted to the reasoning through which qualitative theories are developed. This conceptual theory-building article argues that research methods education can be strengthened by making abductive reasoning more explicit within Grounded Theory. Building on scholarship in Grounded Theory, abductive reasoning, theorising, and doctoral education, it proposes Abductive Grounded Theory (AGT) as an integrated conceptual framework for teaching the generation of qualitative theory. AGT conceptualises theory generation through five epistemic capabilities that describe the cognitive work of abductive inquiry and six methodological design principles that operationalise these capabilities within qualitative research. Rather than introducing abductive reasoning as a new methodological principle, AGT integrates and extends existing scholarship by translating previously dispersed ideas into a coherent pedagogical and methodological framework for doctoral education. The article discusses the implications of this framework for teaching research methods and doctoral supervision, and outlines directions for future research on theorising, researcher cognition, and AI-supported qualitative inquiry. In doing so, it contributes to contemporary debates on doctoral education by reframing theory generation as an explicit, teachable capability and offering a structured framework to make the logic of qualitative discovery more transparent.

Keywords: Abductive Grounded Theory, abductive reasoning, theory generation, doctoral education, qualitative research methods

1. Introduction

Grounded Theory is one of the most widely taught qualitative research methodologies in doctoral education and has become a cornerstone of research methods education across the social sciences, education, management, healthcare, and many other disciplines. Since its introduction by Glaser and Strauss (1967), it has been valued for its systematic analytical procedures, its emphasis on generating theory from empirical data, and its accessibility to novice researchers. Consequently, doctoral candidates are commonly introduced to Grounded Theory as an inductive methodology that enables researchers to build theory from observations rather than test pre-existing theoretical propositions (Glaser & Strauss, 1967; Charmaz, 2014). Yet despite its central place in research methods education, comparatively little explicit attention is devoted to the reasoning through which qualitative theories are

actually generated.

Grounded Theory education has become highly effective at teaching analytical procedures such as coding, constant comparison, theoretical sampling, memo writing, and theoretical saturation. These techniques provide researchers with a rigorous framework for organising and analysing qualitative data. However, considerably less attention is typically devoted to the intellectual work of theorising itself—that is, how researchers move from empirical observations to explanations, from surprising findings to plausible interpretations, and from emerging insights to coherent theoretical accounts. This reflects a broader concern within the social sciences that methodological training has often placed greater emphasis on analytical procedures than on the practice of theory construction (Weick, 1989; Swedberg, 2014). As a result, many novice researchers become proficient in analysing qualitative data while remaining uncertain about how

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theory is actually generated.

This reveals a central paradox within contemporary research methods education. Grounded Theory is commonly presented as an inductive methodology, yet experienced qualitative researchers rarely rely on induction alone. As qualitative inquiry progresses, researchers encounter observations that challenge expectations, contradict existing assumptions, or resist straightforward categorisation. Such moments prompt questions that extend beyond identifying patterns towards explaining them: Why did this occur? What might account for this unexpected finding? Which explanation best fits the available evidence? These are fundamentally abductive questions that seek the most plausible explanation for surprising empirical observations (Peirce, 1931–1958; Hanson, 1958; Reichertz, 2007).

Importantly, this observation is not new. Constructivist Grounded Theory recognises the interpretive role of the researcher and the iterative development of meaning (Charmaz, 2006, 2014). Strauss and Corbin (1998) emphasised explanation-building through systematic analysis, Bryant and Charmaz (2007) highlighted the increasingly interpretive character of Grounded Theory, and Timmermans and Tavory (2012), together with Tavory and Timmermans (2014), argued that abductive reasoning represents a distinctive mode of qualitative theorising. Likewise, Reichertz (2007) suggested that abduction has long operated as an implicit logic within Grounded Theory itself. Nevertheless, these important insights remain dispersed across several methodological traditions and have only occasionally been translated into explicit guidance for teaching theory generation within doctoral research methods education.

This article addresses that pedagogical gap. Rather than arguing that existing Grounded Theory traditions are fundamentally incomplete, it proposes that research methods education can be strengthened by making abductive reasoning more explicit. Building on existing scholarship, the article introduces an elaboration of Abductive Grounded Theory (AGT) as a conceptual framework that integrates insights from Grounded Theory, abductive reasoning, theorising, and doctoral education into a coherent pedagogical model. Specifically, it conceptualises qualitative theory generation through five epistemic capabilities, proposes six methodological design principles that operationalise abductive inquiry, and discusses their implications for research methods teaching and doctoral

supervision. In doing so, the article contributes to contemporary debates on doctoral education by reframing theory generation as an explicit, teachable capability rather than an implicit competence expected to emerge through research experience alone (Kiley, 2009; Lee, 2008).

2. Methodological Approach

This article is a conceptual theory-building endeavour rather than an empirical study. Following Jaakkola's (2020) framework for conceptual research, this approach combines elements of conceptual integration and model development. Its purpose is not to systematically review the literature on Grounded Theory or abductive reasoning, but to address a conceptual problem identified within contemporary research methods education. Specifically, while Grounded Theory scholarship increasingly recognises the importance of abductive reasoning and explanation-building (e.g., Reichertz, 2007; Timmermans & Tavory, 2012; Thornberg, 2012; Charmaz, 2014), these insights remain dispersed across several methodological traditions and are only rarely translated into explicit guidance for teaching theory generation in doctoral education.

The development of AGT was motivated by a process of conceptual problematisation rather than by the discovery of an entirely new methodological principle. The starting point was the observation that doctoral methods education often provides detailed instruction in analytical procedures such as coding, constant comparison, theoretical sampling, and memo writing, while offering comparatively less explicit guidance on the reasoning through which qualitative explanations are generated. This disconnect between methodological instruction and research practice suggested an opportunity to develop a more integrated conceptual framework for teaching qualitative theory generation.

To address this problem, relevant scholarship was selected purposively from four complementary domains: (1) classical and contemporary Grounded Theory, (2) philosophical and methodological work on abductive reasoning, (3) literature on theorising and theory construction, and (4) scholarship on doctoral education and research supervision. These bodies of literature were not reviewed independently but examined comparatively to identify areas of conceptual convergence, complementary insights, and remaining pedagogical gaps.

The AGT framework was subsequently developed through an iterative process of conceptual

integration and model development. The validity of the proposed framework therefore rests on the coherence, transparency, and explanatory power of the conceptual argument rather than on empirical verification (Jaakkola, 2020). Existing concepts were examined for their contribution to understanding qualitative theory generation, overlapping ideas were synthesised into a coherent explanatory framework, and areas where methodological guidance remained largely implicit were made explicit through the development of a multi-level conceptual framework comprising two complementary but analytically distinct models: (1) five epistemic capabilities that explain the cognitive work of qualitative theorising, and (2) six methodological design principles that translate these cognitive capabilities into the design of qualitative inquiry.

Accordingly, the contribution of AGT does not lie in introducing abductive reasoning, theoretical sensitivity, or reflexive qualitative inquiry, all of which are well established in the methodological literature. Rather, its contribution lies in integrating these previously dispersed ideas into a coherent pedagogical and methodological framework that makes the logic of qualitative discovery more explicit, teachable, and transparent for doctoral researchers and their supervisors.

3. The Contribution of AGT: Synthesis, Extension, and Innovation

Abductive Grounded Theory (AGT) should not be understood as introducing abductive reasoning into qualitative inquiry for the first time. Important contributions have already demonstrated the role of abduction in scientific discovery (Peirce, 1931–1958), Grounded Theory (Reichert, 2007), abductive qualitative analysis (Timmermans & Tavory, 2012; Tavory & Timmermans, 2014), informed Grounded

Theory (Thornberg, 2012), constructivist Grounded Theory (Charmaz, 2006, 2014), reflexive qualitative methodology (Alvesson & Skoldberg, 2018), and theory construction (Weick, 1989; Swedberg, 2014). Accordingly, the purpose of AGT is not to replace these traditions or claim conceptual priority over them.

Instead, AGT makes three distinct contributions. First, it synthesises previously dispersed methodological traditions into a coherent framework that integrates abductive reasoning, theoretical sensitivity, reflexive inquiry, and explanation-centred theorising within a single conceptual architecture.

Second, it extends existing scholarship by proposing a cognitive perspective on qualitative theory generation through five epistemic capabilities – noticing, wondering, imagining, evaluating, and refining. Rather than describing theory generation primarily as a sequence of analytical procedures, AGT conceptualises it as a set of learnable cognitive capabilities that underpin abductive inquiry.

Third, it translates these conceptual insights into a pedagogical framework for doctoral research methods education. While many existing methodological texts acknowledge abductive reasoning, they generally treat it as an implicit feature of experienced qualitative practice. AGT seeks to make this reasoning explicit by linking the five epistemic capabilities with six methodological design principles and demonstrating how they can inform research methods, teaching, and doctoral supervision.

The contribution of AGT therefore lies less in proposing entirely new qualitative techniques than in integrating, extending, and educationally operationalising existing scholarship into a coherent framework for explanation-centred qualitative inquiry. Table 1 summarises this positioning.

Table 1. Summary of the Synthesis, Extension, and Innovation forming AGT

Existing scholarship	Already established in the literature	AGT contribution
Peirce (1931–1958)	Abduction as the logic of explanation	Operationalises abductive reasoning for doctoral research methods education.
Reichert (2007)	Abduction as a logic within Grounded Theory	Integrates abductive logic into a coherent pedagogical and methodological framework.
Timmermans & Tavory (2012); Tavory & Timmermans (2014)	Abductive analysis as an iterative dialogue between data and theory	Provides an explicit teaching model that translates abductive analysis into doctoral learning outcomes.
Thornberg (2012)	Informed Grounded Theory and theoretical sensitivity	Extends theoretical sensitivity into five teachable epistemic capabilities.
Charmaz (2006, 2014)	Constructivist, interpretive Grounded Theory	Builds on constructivist GT while making explanation-building a central educational objective.

Table 1 (continued)

Existing scholarship	Already established in the literature	AGT contribution
Alvesson & Kärreman (2007)	Empirical mysteries as drivers of theory development	Positions surprise as a formal design principle of AGT.
Swedberg (2014); Weick (1989)	Theory construction and theorising	Integrates theorising into a structured model of researcher cognition and methodological design.
Overall contribution	Existing literature recognises abductive reasoning, reflexivity, theoretical sensitivity, and theorising.	AGT synthesises these traditions, introduces a cognitive model of five epistemic capabilities, articulates six methodological design principles, and translates both into an integrated framework for doctoral education.

4. Teaching Grounded Theory

Grounded Theory occupies a central place in qualitative research methods education. Across doctoral programmes in education, the social sciences, management, healthcare, and related disciplines, it is widely introduced as a systematic methodology for generating theory from empirical data (Glaser & Strauss, 1967; Charmaz, 2014). Its enduring appeal lies in providing novice researchers with a transparent analytical framework for navigating complex qualitative data while maintaining methodological rigour.

Accordingly, the teaching of Grounded Theory typically centres on a well-established repertoire of analytical procedures. Doctoral students learn how to conduct open coding to identify concepts within qualitative data, axial coding to explore relationships between categories, and selective coding to integrate these categories into an emerging theoretical framework (Strauss & Corbin, 1998). They are introduced to the principle of constant comparison, whereby incidents are continuously compared to refine concepts and categories (Glaser & Strauss, 1967). Research methods courses further emphasise theoretical sampling as a strategy for guiding subsequent data collection and discuss theoretical saturation as an indicator that additional data no longer contribute substantial conceptual insights (Charmaz, 2014; Corbin & Strauss, 2015). Together, these procedures constitute one of Grounded Theory's most influential contributions to qualitative methodology.

This procedural emphasis has significantly strengthened the quality and transparency of qualitative inquiry. Students acquire systematic approaches for organising qualitative evidence, documenting analytical decisions, and developing increasingly abstract conceptual categories. As Locke (2001) and Suddaby (2006) argue, these procedures provide an essential methodological foundation for

rigorous theory development rather than simply functioning as technical coding exercises.

At the same time, the educational emphasis on analytical procedures means that the intellectual work of theorising often receives comparatively less explicit attention. While coding, comparison, sampling, and memo writing are taught in considerable detail, the reasoning through which researchers move from organised observations to explanatory accounts is more frequently assumed than systematically taught (Swedberg, 2014). As Weick (1989) reminds us, theory construction involves more than the application of analytical techniques; it is also a process of disciplined imagination directed towards explanation. Similarly, Maxwell (2013) argues that qualitative inquiry ultimately seeks not only to describe social phenomena but also to explain them.

Recognising this distinction does not diminish the importance of coding. Rather, it clarifies its role within qualitative inquiry. Coding provides the analytical foundation upon which theory can be developed, but it does not itself constitute explanation. This observation motivates the central question explored in the following section: if coding organises empirical observations, what form of reasoning enables researchers to transform those observations into explanatory theory?

5. Beyond Induction

Induction has long occupied a central position within Grounded Theory and qualitative research more broadly. Since the publication of *The Discovery of Grounded Theory*, researchers have been encouraged to approach empirical inquiry with openness, allowing concepts and categories to emerge from the data rather than imposing preconceived theoretical frameworks (Glaser & Strauss, 1967). This inductive orientation represented a major methodological advance by challenging the

dominance of hypothesis testing and encouraging researchers to remain attentive to the richness and complexity of lived experience (Charmaz, 2014).

The value of induction is therefore not in question. It enables researchers to recognise recurring patterns, identify meaningful similarities and differences, and develop increasingly abstract conceptual categories grounded in empirical observations. In doing so, it addresses questions such as: What is happening? Which patterns are emerging? And which concepts best describe the phenomenon? However, as Maxwell (2013) argues, qualitative inquiry ultimately seeks not only to describe social phenomena but also to explain them. Pattern recognition alone does not provide such explanations.

The transition from induction to abduction occurs when researchers move beyond describing patterns to asking why they occur. Once categories begin to emerge, inquiry shifts towards questions such as: Why do these patterns arise? What mechanisms might account for them? Why do apparently similar situations produce different outcomes? These questions seek explanations rather than descriptions. In this sense, induction primarily addresses what is happening, whereas abduction seeks to explain why it is happening.

This shift can be illustrated through educational research. A qualitative study may find that novice teachers participating in the same professional development programme demonstrate markedly different levels of classroom effectiveness. Inductive analysis may identify recurring categories such as mentoring quality, self-efficacy, organisational support, or reflective practice. These categories describe important dimensions of the phenomenon but do not, by themselves, explain why some teachers flourish while others struggle. Researchers therefore begin exploring alternative explanatory accounts, moving beyond description towards theory development.

Such explanatory inquiry is frequently triggered by surprise. Peirce (1931–1958) regarded surprising observations as the starting point of inquiry because they stimulate the search for explanation. Hanson (1958) likewise argued that scientific discovery begins when existing conceptual frameworks fail to account adequately for empirical observations. Rather than treating anomalies as problems to be eliminated, researchers use them as opportunities for theoretical advancement. Alvesson and Kärreman (2007) describe such empirical "mysteries" as

productive moments of theory development, while Timmermans and Tavory (2012), together with Tavory and Timmermans (2014), argue that abductive reasoning emerges through the dialogue between surprising empirical observations and existing theoretical understanding.

Abductive reasoning is therefore not a single moment of insight but an iterative process of generating, comparing, and refining competing explanations. Researchers move repeatedly between empirical observations, emerging concepts, existing literature, and alternative theoretical perspectives, progressively identifying the explanation that best accounts for the available evidence. As Weick (1989) observed, theory construction is an exercise in disciplined imagination rather than a mechanical extension of analytical procedures.

The argument advanced here is therefore not that induction should be replaced, but that it should be complemented. Induction provides the analytical foundation for identifying meaningful empirical patterns, whereas abduction provides the explanatory reasoning through which those patterns are transformed into theory. Understanding this complementary relationship creates the basis for the framework developed in the following section, which conceptualises abductive theory generation through a set of epistemic capabilities.

6. The Hidden Logic of Qualitative Discovery – Towards Five Epistemic Capabilities

The previous sections argued that qualitative theory generation requires more than identifying empirical patterns. An important question, therefore, remains: what does abductive theorising actually involve in practice? AGT addresses this question by conceptualising qualitative theory generation as the enactment of five epistemic capabilities that support researchers in moving from empirical observations towards explanatory understanding.

Rather than viewing abduction solely as a logical form of inference (Peirce, 1931–1958), AGT reconceptualises it as a model of researcher cognition. These epistemic capabilities do not represent discrete methodological techniques but recurring habits of inquiry through which qualitative researchers generate, evaluate, and refine explanations. They describe ways of thinking that can be intentionally cultivated through research methods education and doctoral supervision (Kiley, 2009). Collectively, these capabilities should not be interpreted as sequential stages but as recursive cognitive activities

that researchers revisit throughout qualitative inquiry as explanations evolve.

Noticing: Developing Theoretical Sensitivity

Qualitative inquiry begins with careful engagement with empirical data. Experienced researchers, however, develop what Glaser (1978) described as theoretical sensitivity—the capacity to recognise observations that are conceptually significant. Noticing, therefore, involves identifying observations that challenge existing assumptions, reveal meaningful variation, or warrant deeper investigation. Without this capability, important opportunities for theory development remain hidden within the data.

Wondering: Transforming Surprise into Inquiry

Wondering begins when empirical observations no longer fit the researcher's emerging understanding. A participant expresses an unexpected perspective, a previously successful intervention fails in a new setting, or a case contradicts the developing explanation. Such surprises stimulate intellectual curiosity and shift attention from categorisation towards explanation. Rather than asking only What category does this belong to?, researchers begin asking Why has this occurred?, What am I overlooking?, or what alternative explanation could account for this? Wondering, therefore, marks the transition from descriptive analysis to explanatory inquiry.

Imagining: Generating Plausible Explanations

Once a theoretically significant question has emerged, researchers begin constructing possible explanations. This process is inherently creative yet remains grounded in empirical evidence. Researchers draw upon emerging data, prior experience, existing literature, and theoretical insight to formulate explanations that account for the observed phenomenon. Multiple explanations may initially appear plausible. The task is therefore not to identify the first explanation but to generate a range of possibilities that merit further exploration. As Weick (1989) observed, theorising is an exercise in disciplined imagination, while Alvesson and Kärreman (2007) argue that empirical "mysteries" often stimulate precisely this kind of explanatory creativity.

Evaluating: Exercising Explanatory Judgment

Generating explanations is only the beginning of

abductive inquiry. Researchers must also evaluate their plausibility. Candidate explanations are compared against empirical evidence, challenged through theoretical sampling, scrutinised through constant comparison, and refined through engagement with relevant literature and reflexive memo writing. Alternative interpretations are deliberately considered, while explanations that fail to account adequately for the evidence are revised or discarded. Evaluation, therefore, represents the exercise of explanatory judgment through which researchers progressively identify the interpretation that provides the most coherent account of the phenomenon under investigation (Timmermans & Tavory, 2012).

Refining: Building Explanatory Theory

Refining recognises that theory develops through continual improvement rather than a single moment of discovery. As new evidence emerges, explanations are revisited, expanded, integrated, or reconsidered. Theoretical understanding becomes progressively richer and more coherent through repeated cycles of inquiry. Importantly, refinement is directed not towards producing increasingly elaborate categories but towards developing explanations with greater explanatory power. Theory therefore emerges through successive refinement rather than through the automatic accumulation of analytical codes (Swedberg, 2014).

Together, these five epistemic capabilities describe the cognitive dimension of abductive theory generation. Rather than prescribing a sequence of analytical procedures, they identify the recurring intellectual activities through which researchers develop explanations from empirical observations. This cognitive perspective provides the conceptual foundation for the methodological principles of AGT introduced in the following section.

7. Why Doctoral Students Struggle with Theory Generation

Developing theory is widely recognised as one of the most demanding aspects of doctoral research and one of the central developmental challenges of doctoral education (Kiley, 2009). While many doctoral candidates become increasingly confident in collecting qualitative data, conducting interviews, coding transcripts, and organising categories, considerably fewer develop equal confidence in constructing explanatory theory. The challenge rarely reflects a lack of analytical effort or methodological

commitment. Rather, it stems from the different cognitive demands of analysis and theorising.

Grounded Theory education has made remarkable progress in equipping doctoral students with systematic analytical procedures. Contemporary research methods courses provide clear guidance on coding, constant comparison, memo writing, theoretical sampling, and theoretical saturation. These procedures establish methodological rigour and offer an accessible pathway into qualitative inquiry. However, procedural competence alone does not automatically develop the capacity for explanation.

Unlike analytical procedures, theorising depends upon cognitive processes that are less readily observable and therefore more difficult to teach directly. Researchers must recognise theoretically significant surprises, formulate explanatory questions, imagine alternative interpretations, evaluate competing explanations, and continually refine emerging accounts. These activities correspond to the five epistemic capabilities introduced in the previous section. As Swedberg (2014) argues, research methods education has traditionally devoted considerably more attention to methodological procedures than to the practice of theorising itself.

Consequently, many doctoral researchers approach qualitative analysis primarily through procedural questions such as Which code best fits this quotation?, Should this incident form a new category?, or have I reached saturation? Although these questions remain methodologically important, experienced researchers increasingly ask explanatory questions instead: Why has this occurred?, What explains this unexpected observation?, and which interpretation best accounts for the available evidence? Developing the capacity to move between these two forms of inquiry represents an important developmental transition in qualitative research.

The challenge, therefore, is not that doctoral students are incapable of theorising, but that the reasoning underpinning theory generation often remains implicit within research methods education. Students are frequently expected to acquire these capabilities gradually through research experience, intuition, and supervisory dialogue rather than through explicit methodological instruction (Lee, 2008). AGT responds to this challenge by making the

cognitive processes of theory generation visible and teachable. Rather than treating theorising as an intuitive leap beyond analysis, it conceptualises it as a set of epistemic capabilities that can be intentionally cultivated through doctoral education.

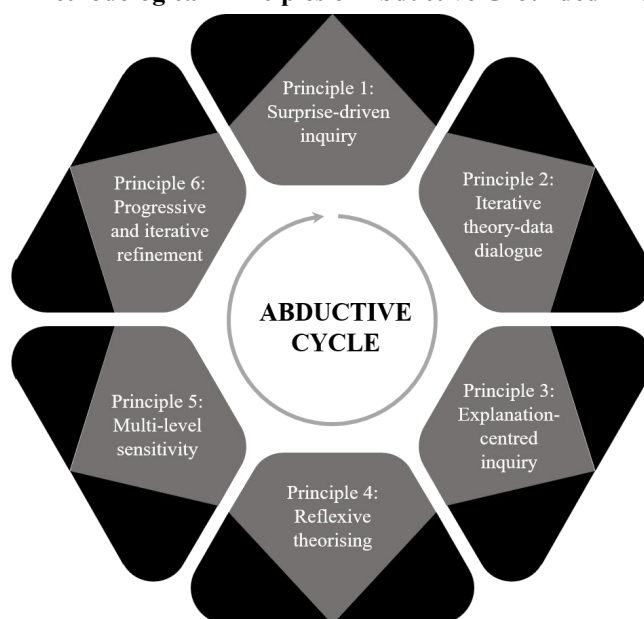
While the previous section conceptualised the cognitive capabilities underpinning qualitative theorising, the next section translates these capabilities into six methodological design principles that operationalise Abductive Grounded Theory. Together, these two complementary levels—the cognitive and the methodological—provide an integrated framework for making the logic of qualitative theory generation more explicit within doctoral research methods education.

8. Operationalising AGT Through Six Methodological Design Principles

The previous section conceptualised qualitative theory generation through five epistemic capabilities that describe the cognitive work of abductive inquiry. AGT complements this cognitive perspective with six methodological design principles that translate these capabilities into the design and conduct of qualitative research.

Whereas the epistemic capabilities explain how researchers generate explanations, the methodological principles explain how abductive inquiry can be organised. Together, they form a multi-level conceptual framework comprising two complementary but analytically distinct dimensions. The epistemic capabilities describe the recurring intellectual activities involved in theory generation, while the methodological principles provide the methodological architecture through which these activities are supported throughout the research process.

Accordingly, the six principles presented below should be understood as methodological design principles rather than procedural steps. They do not prescribe a rigid sequence of research activities or replace established Grounded Theory techniques such as coding, constant comparison, memo writing, or theoretical sampling. Instead, they provide an abductive rationale that integrates these established methods within an explanation-centred logic of qualitative inquiry. Figure 1 illustrates this methodological architecture.

Figure 1. Six Methodological Principles of Abductive Grounded Theory (AGT)

**Source: Adapted from Amann (2026), p. 114*

Principle 1: Surprise-driven inquiry

AGT recognises surprise as the primary catalyst for theory generation. Building upon Peirce's (1931–1958) conception of inquiry, as well as subsequent discussions of surprise in abductive analysis (Timmermans & Tavory, 2012; Alvesson & Kärreman, 2007), unexpected findings, contradictions, and anomalies become valuable opportunities for discovery rather than problems to be resolved or excluded. Moments of surprise stimulate theoretical curiosity, challenge existing assumptions, and initiate new cycles of explanation. Consequently, inquiry is driven not only by recurring patterns but also by observations that resist immediate understanding.

Principle 2: Iterative theory-data dialogue

Theory generation is understood as an ongoing dialogue between empirical observations and emerging explanations. Researchers move continuously between data, tentative interpretations, existing literature, and additional empirical inquiry. Rather than separating data collection, analysis, and theorising into distinct phases, AGT views these activities as mutually informing one another throughout the research process. This iterative movement between empirical observations and the development of explanations reflects the abductive dialogue described by Timmermans and Tavory (2012).

Principle 3: Explanation-centred inquiry

The central objective of AGT is not merely the development of categories but the construction of explanations. Categories organise empirical observations; explanations account for why those observations occur and how they are related. Theory therefore emerges through progressively developing explanatory understanding rather than through the accumulation of descriptive concepts alone. This emphasis reflects Maxwell's (2013) observation that qualitative inquiry seeks not only to describe social phenomena but also to explain them.

Principle 4: Reflexive theorising

AGT recognises that researchers play an active role in theory generation. Explanations are continually shaped through interpretation, critical reflection, engagement with literature, and consideration of alternative perspectives. Reflexivity therefore extends beyond acknowledging researcher positionality; it becomes an integral component of theorising itself, enabling researchers to examine, challenge, and refine their emerging explanations throughout the inquiry. In this respect, AGT builds upon broader traditions of reflexive qualitative methodology (Alvesson & Sköldberg, 2018).

Principle 5: Multi-level sensitivity

Qualitative phenomena rarely operate at a single level of analysis. Individual experiences are

embedded within interpersonal relationships, organisational contexts, institutional arrangements, and broader societal conditions. AGT therefore encourages researchers to remain theoretically sensitive to multiple levels of explanation and to explore how processes operating across these levels interact in shaping the phenomenon under investigation. Theory generation consequently moves beyond isolated observations towards more integrated, contextually grounded, and systemically informed explanations.

Principle 6: Progressive and iterative refinement

Theory is not regarded as a final product but as the current best explanation of the available evidence. As additional observations are gathered, new surprises emerge, and alternative interpretations are considered, explanations continue to evolve. AGT therefore views theory generation as an ongoing process of progressive refinement through which explanatory accounts become increasingly coherent, comprehensive, and theoretically robust. Rather than representing the endpoint of analysis, refinement reflects the continuing development of theorising itself (Swedberg, 2014).

Taken together, these six methodological design principles operationalise the cognitive capabilities introduced in the previous section and constitute the methodological architecture of AGT. Rather than prescribing new analytical techniques, they provide an abductive rationale for organising qualitative inquiry around the development and evaluation of explanations. In this respect, AGT builds upon established Grounded Theory practices while integrating insights from constructivist, informed, and abductive traditions into a coherent explanation-centred framework.

Viewed together, the five epistemic capabilities and six methodological principles represent two complementary levels of AGT. The former explains the cognitive work of qualitative theorising; the latter organises that work methodologically within qualitative inquiry. This distinction provides a more explicit account of how qualitative theories are generated and offers a framework through which doctoral researchers and supervisors can more deliberately cultivate the practice of theory generation.

9. Implications for Teaching Research Methods

If AGT is accepted as a framework for understanding qualitative theory generation, it has

important implications for doctoral research methods education. The argument advanced in this article is not that Grounded Theory is taught incorrectly or that its established analytical procedures should be replaced. Rather, it suggests that research methods education can be strengthened by making the reasoning underlying qualitative theory generation more explicit.

Coding, constant comparison, theoretical sampling, memo writing, and theoretical saturation remain essential components of qualitative inquiry. However, if theory generation depends upon abductive reasoning, research methods education should place equal emphasis on cultivating students' capacity for explanation alongside procedural competence. As Kiley (2009) argues, doctoral education is concerned not only with acquiring research techniques but also with developing the intellectual capabilities associated with independent scholarly inquiry.

This perspective extends the intended learning outcomes of doctoral research methods education beyond procedural mastery towards the development of the epistemic capabilities described earlier in this article. Students should therefore learn not only how to conduct rigorous qualitative analysis but also how to recognise theoretically significant observations, formulate explanatory questions, evaluate competing interpretations, and progressively refine emerging theory. In this way, qualitative methods education becomes concerned with developing researchers' capacity for theorising as well as their methodological competence.

Several practical implications follow. Research methods courses should encourage students to treat unexpected findings as opportunities for theory development rather than deviations from emerging categories. Classroom discussions should move beyond evaluating the appropriateness of codes towards considering competing explanations. Memo writing should support the development of explanatory arguments rather than simply documenting analytical decisions. Likewise, engagement with literature should be presented as an iterative dialogue that continually informs, challenges, and refines emerging interpretations throughout the research process.

Collectively, these implications illustrate the educational rationale of AGT. Rather than introducing entirely new classroom techniques, AGT reorients the purpose of qualitative research methods education towards making theory generation an

explicit learning objective. Table 2 summarises how adopting AGT expands – rather than replaces – the educational emphasis of conventional Grounded Theory instruction. The pedagogical implications of

AGT may therefore be summarised as a shift from procedural competence towards epistemic capability (cf. Table 2).

Table 2. From Procedural Competence to Explanatory Reasoning: Expanding Grounded Theory Education Through AGT

Current emphasis in Grounded Theory education	Expanded emphasis through AGT	Educational implication
Analysing data	Explaining phenomena	Teach students to ask 'Why?' rather than only 'What?'.
Developing categories	Developing explanatory models	Focus on explanation-building rather than categorisation alone.
Achieving saturation	Progressive theory refinement	Encourage iterative theorising instead of viewing saturation as the endpoint.
Applying procedures	Exercising explanatory judgment	Develop abductive reasoning alongside methodological competence.
Managing qualitative evidence	Generating theory	Emphasise explanation over description.
Learning techniques	Developing epistemic capabilities	Teach researchers how to think, not only what to do.

Importantly, these shifts should not be interpreted as abandoning the established procedures of Grounded Theory. Coding, constant comparison, theoretical sampling, and memo writing remain indispensable components of qualitative inquiry. AGT broadens their educational purpose by making explicit the abductive reasoning through which these established methods contribute to theory generation.

Taken together, these implications suggest that theory generation should be treated not as an implicit outcome of qualitative analysis but as an explicit educational objective within doctoral research methods education. AGT provides one framework for supporting this shift by integrating established methodological procedures with the cognitive capabilities required for abductive inquiry. The implications of this perspective extend beyond classroom teaching to doctoral supervision, which is considered in the following section.

10. Implications for Doctoral Supervision

The implications of AGT extend from research methods teaching to doctoral supervision. While formal coursework introduces qualitative methodology, much of the development of theoretical thinking occurs through sustained dialogue between doctoral candidates and their supervisors. As Lee (2008) argues, doctoral supervision is concerned not only with overseeing research projects but also with supporting the development of independent researchers. Supervisory conversations, therefore, provide an important context for cultivating the epistemic capabilities required for qualitative theory

generation.

An abductive perspective suggests that doctoral supervision should move beyond methodological coaching towards epistemic coaching. Rather than concentrating primarily on whether students have correctly applied qualitative procedures, supervisors can help students cultivate the epistemic capabilities of noticing, wondering, imagining, evaluating, and refining that underpin theory generation. The supervisory conversation therefore shifts from evaluating analytical products towards cultivating the reasoning processes through which those products are generated. This shift is reflected in the kinds of questions supervisors ask. Procedural supervision tends to emphasise questions such as:

- 1) What code best represents this quotation?
- 2) Should this become a separate category?
- 3) Have you reached theoretical saturation?
- 4) How many interviews do you still need?

These questions remain important, but they primarily support analytical organisation. Abductive supervision complements them with questions that stimulate theoretical thinking:

- 1) What is surprising about this observation?
- 2) Why might this be happening?
- 3) What explanation best accounts for this finding?
- 4) What alternative explanations remain plausible?
- 5) What evidence challenges your current

interpretation?

- 6) Which literature supports or contradicts your emerging explanation?
- 7) How has your thinking changed since analysing the previous interviews?

Such questions encourage doctoral researchers to move beyond describing empirical patterns towards constructing explanatory accounts of the phenomena they are studying. Rather than viewing theory generation as a mysterious intellectual leap, supervisory dialogue becomes an opportunity to make the reasoning underlying qualitative discovery explicit.

This perspective also changes the role of the supervisor. Instead of acting primarily as a methodological expert who evaluates whether procedures have been correctly followed, the supervisor increasingly becomes a facilitator of theoretical inquiry. The supervisor encourages curiosity, legitimises uncertainty, challenges premature conclusions, introduces competing

perspectives, and supports the iterative refinement of explanations. In doing so, supervision becomes less about verifying methodological compliance and more about developing scholarly judgment. This broader conception of supervision aligns with mentoring perspectives that emphasise intellectual development, critical reflection, and the formation of scholarly identity rather than procedural oversight alone (Manathunga, 2007).

Importantly, this perspective does not diminish the importance of methodological rigour. Coding, constant comparison, memo writing, theoretical sampling, and systematic analysis remain indispensable components of qualitative inquiry. AGT instead broadens the purpose of supervision by integrating procedural guidance with explicit support for abductive reasoning and explanation-building. Table 3 summarises this shift from procedural towards epistemic supervision. Rather than focusing solely on methodological compliance, supervisory dialogue becomes a setting in which doctoral researchers develop the scholarly judgement required for qualitative theory generation.

Table 3. From Procedural to Epistemic Supervision

Traditional supervisory question		Abductive supervisory question	
What code fits this quotation?		What is surprising here?	
Which category does this belong to?		What might explain this?	
Have you reached saturation?		How has your explanation evolved?	
Does this fit your framework?		What evidence challenges your framework?	
How many interviews remain?	What additional evidence would strengthen or change your explanation?		
Have you completed the analysis?	What is the best explanation you can currently offer?		

11. Future Directions

The conceptual framework presented in this article opens several opportunities for future research. As AGT is proposed as a conceptual and pedagogical framework, its value ultimately depends on continued theoretical refinement and empirical evaluation.

First, future research should examine the educational effectiveness of AGT within doctoral research methods education. Comparative studies could investigate whether explicit instruction in abductive reasoning and the epistemic capabilities proposed here enhance doctoral researchers' ability to generate explanations, develop theoretical confidence, and construct qualitative theory when compared with more conventional approaches to Grounded Theory instruction (Kiley, 2009).

Second, further work is needed to explore how AGT can be implemented within doctoral curricula and supervision. Future studies might investigate

how the five epistemic capabilities and six methodological design principles can be incorporated into research methods courses, doctoral seminars, supervisory practices, and assessment strategies. Such work would contribute to a more explicit pedagogy of qualitative theory generation.

Third, rapid advances in artificial intelligence present important opportunities and challenges for abductive inquiry. While AI increasingly supports transcription, coding, pattern recognition, and literature searching, its role in explanation generation remains comparatively underexplored. Future research should therefore examine how AI can complement rather than replace human abductive reasoning, and how researchers can retain responsibility for theoretical imagination, explanatory judgement, reflexive interpretation, and theory development within AI-assisted qualitative inquiry.

Finally, AGT invites further investigation into

the generation of theory itself. The framework proposed here suggests that theorising can become a legitimate object of scholarly inquiry rather than remaining an implicit capability acquired primarily through research experience. Future research should therefore examine how researchers develop explanatory judgement, how the epistemic capabilities evolve over time, and how they can be intentionally cultivated through doctoral education and supervision. Such work would not only refine AGT but also contribute to a broader understanding of theorising as a central scholarly capability (Swedberg, 2014; Weick, 1989).

12. Conclusion

Grounded Theory has transformed qualitative research by providing systematic procedures for developing theory from empirical data. At the same time, this article has argued that an important dimension of qualitative inquiry has remained comparatively implicit within doctoral research methods education: the reasoning through which researchers move from empirical observations to explanatory theory.

Rather than proposing a replacement for existing Grounded Theory traditions, AGT seeks to complement them by making abductive reasoning more explicit within both qualitative inquiry and research methods education. The article has advanced four principal contributions. First, it has argued that research methods education should extend its emphasis beyond procedural competence to include the explicit development of explanatory reasoning. Second, it has conceptualised qualitative theory generation through five epistemic capabilities – noticing, wondering, imagining, evaluating, and refining – that describe the cognitive work of abductive inquiry. Third, it has translated these capabilities into six methodological design principles that organise qualitative inquiry around explanation-centred theorising. Finally, it has demonstrated how this framework can inform the teaching of research methods and the practice of doctoral supervision.

Taken together, these contributions position AGT as an integrated conceptual framework operating at two complementary levels. The first concerns the cognitive capabilities through which researchers generate explanations; the second concerns the methodological principles that organise abductive inquiry. Making both dimensions explicit provides a richer account of qualitative theory

generation while offering doctoral educators a clearer framework for teaching, supervising, and supporting the development of qualitative theorists.

Ultimately, AGT should not be understood simply as another variant of Grounded Theory. Rather, it offers a conceptual integration of researcher cognition, methodological design, and doctoral pedagogy that makes the logic of qualitative theory generation more explicit. If this framework stimulates further dialogue about how researchers generate explanations—and how those capabilities can be intentionally cultivated through research methods education and doctoral supervision—it will already have achieved its principal aim.

Conflict of Interest

The author declares that he has no conflicts of interest in this work.

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