



FOUNDATIONS OF GROUNDED THEORY (GT)

: CONCEPTS, PROCEDURES AND TRENDS

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ABSTRACT

Objective: Grounded theory (GT) is a systematic methodology predominantly utilized in qualitative research by social scientists. The process entails formulating hypotheses and theories via data collection and analysis. Grounded theory employs inductive reasoning.

Method: This article explains the concepts and systematic methodology of Grounded Theory. Data were purposively selected from papers published in English, primarily between 2015 and 2025. Content analysis was adopted.

Results: The Grounded Theory study typically commences with a query or the collection of qualitative data. As researchers analyze the collected data, insights or conceptions emerge for them. These ideas/concepts are purported to "emerge" from the data. The researchers assign codes to those ideas/concepts that concisely encapsulate their essence. As additional data are gathered and re-evaluated, codes may be consolidated into overarching concepts and subsequently into categories.



Conclusion: Content categories serve as the foundation for a hypothesis or a novel theory. Consequently, grounded theory markedly diverges from the conventional scientific research model, wherein the researcher selects a pre-existing theoretical framework, formulates one or more hypotheses based on that framework, and subsequently gathers data to evaluate the validity of the hypotheses.

Keywords: Grounded Theory, Qualitative Research methodology, Theory Generation, Inductive Reasoning,

1. INTRODUCTION

Grounded theory (GT) is a known qualitative research methodology that generates theory inductively from empirical data. Since its inception in the 1960s, GT has evolved into a widely adopted approach across disciplines. This article explores the historical development of GT, its philosophical underpinnings in symbolic interactionism, and the methodological evolution from this lineage. Drawing on the foundational works of Mead (1934) and Blumer (1969), the paper demonstrates how GT's interpretive stance is conceptually anchored in the social perception of meaning. The article also presents a balanced discussion of both advocacy and critique, highlighting GT's relevance and limitations in institutional and applied research contexts. The paper also highlights the application of GT in various academic disciplines. It is also crucial to discuss the pitfalls and the necessary discipline to be observed when conducting qualitative research using the GT method, especially for novice researchers. In addition to its common application in exploratory research, recommendations are provided for the responsible integration of this approach into mixed-methods and governance-oriented research.

Grounded theory (GT) is a qualitative research methodology for generating theory inductively from data. It advocates emergent theory, suggesting that patterns, categories, and concepts are rooted through methodical data collections and analysis, especially in the absence of or an insufficient existing theoretical framework. The methodology focuses on exploring how individuals perceive and respond to a phenomenon. GT thus provides a rigorous yet flexible approach to theory construction, enabling researchers to navigate complex social phenomena with methodological integrity and interpretive depth (Chun Tie et al., 2019).

GT was developed by sociologists Glaser & Strauss in 1967, who pioneered a systematic yet flexible approach to qualitative inquiry. In contrast to the deductive approach, which begins with a hypothesis, GT develops theory from the data itself, which is well-suited for exploratory research in complex social environments (Glaser & Strauss, 1967). Since its introduction, the methodology has been widely adopted across academic disciplines.

2. LITERATURE REVIEW

2.1 Historical Foundations of GT

The origins of GT are rooted in Glaser and Strauss's collaborative research on dying patients in hospital settings, published as *Awareness of Dying* (Glaser & Strauss, 1965). This study challenged prevailing assumptions about death and dying by documenting the nuanced interactions among patients, families, and medical staff. Rather than applying pre-existing theoretical models, the researchers allowed concepts to emerge inductively from field data, laying the foundation for grounded theory's core principles.

Philosophically, GT draws its foundation from symbolic interactionism, particularly the work of Mead (1934) and Blumer (1969). Mead (1934) introduced the idea that the self is a social construct formed through interaction, while Blumer (1969) formalized symbolic interactionism as a methodological framework. Blumer advocated that individuals act based on the meanings things have for them, which are derived through social interaction. This interpretive stance closely parallels GT's emphasis on understanding how people interpret their experiences within their social contexts.

Milliken and Schreiber (2012) affirm this connection, stating that "GT is inherently symbolic interactionist," and highlighting how concepts such as *mind*, *self*, and *society*, which form the core of symbolic interactionism, are foundational to grounded theorizing. Charmaz (2006) further reinforces this view, noting that GT's interpretive stance is deeply informed by the symbolic interactionist tradition.

The intellectual backgrounds of Glaser and Strauss also influence the fundamentals of the methodology (Niasse, 2022, 2023). Glaser, trained in quantitative research, emphasized systematic procedures, theoretical sampling, and analytical precision, advocating for the emergence of theory directly from data without the imposition of prior assumptions. In contrast, Strauss, shaped by the ethnographic and symbolic interactionist legacy of the Chicago School, introduced a contextual and interpretive orientation that foregrounded meaning-making, social processes, and the researcher's reflexive engagement with the field.

The convergence of two distinct methodological traditions, each contributing essential dimensions to its enduring utility. Their collaboration yielded a methodological framework that balances empirical rigor with interpretive depth, enabling GT to transcend disciplinary boundaries while remaining anchored in the lived realities of participants. Their synthesis yielded a methodology that strikes a balance between structure and flexibility, enabling it to adapt to diverse research environments.

2.2 Evolution of the GT Paradigm

Since its inception, GT has evolved into several distinct iterations, each underscores different philosophical orientations, as shown in Table 1 below.

- **Postpositivist GT** (Strauss & Corbin, 1990): Introduces structured coding procedures and acknowledges the researcher's role in shaping the analysis. This version strikes a balance between inductive discovery and systematic rigor, and is often employed in the applied social sciences.
- **Objectivist GT** (Glaser, 1978): Emphasizes theory discovery through minimal researcher interference. The researcher maintains neutrality, allowing categories to emerge directly from the data without preconceived frameworks.
- **Constructivist GT** (Charmaz, 2006, 2025): Recognizes that theory is co-constructed through the interaction between researcher and participant. It emphasizes reflexivity, subjectivity, and the interpretive nature of qualitative inquiry.

Table 1. The Characteristics of GT

Paradigm	Philosophical Orientation	Researcher Role	Methodological Features	Notable Studies
Objectivist Grounded Theory	Positivist/ Realist	Neutral observer; minimal interference	- Emphasizes emergence from data - Avoids preconceptions - Uses constant comparison and theoretical sampling	Coşkun (2020).

Postpositivist Grounded Theory	Symbolic Interactionism & Pragmatism	Structured analyst; acknowledges influence	<ul style="list-style-type: none"> - Systematic coding (open, axial, selective) - Balances rigor with inductive emergence - Often used in applied social sciences 	Ralph et al.(2015); Bakhtiar et al. (2020); Madani et al. (2024)
Constructivist Grounded Theory	Interpretivist/ Relativist	Co- constructor of meaning; reflexive participant	<ul style="list-style-type: none"> - Emphasizes subjectivity and reflexivity - Theory emerges through interaction - Flexible coding and memoing practices 	Ilias et al. (2019); Higginbotham et al. (2021); Kelley et al. (2022); Pérez et al. (2022); Hammar Chiriac et al. (2023); Charmaz (2025).

2.3 The GT Procedures and their Variations

The GT procedures can be divided into two phases (Figure 1). The first phase is a cyclical process that begins with data collection, typically through interviews, observations, or documents, guided by open-ended inquiry rather than predefined hypotheses. The second phase is known as the theory construction phase, in which all other categories are linked into a cohesive explanatory framework (Corbin & Strauss, 2015).

Researchers engage in open coding, segregate data into discrete units, and assign conceptual labels to emerging patterns. This initial phase is characterized by constant comparison, where each data segment is compared with others to refine categories and identify recurring themes. The goal is to remain grounded in the data, allowing theory to emerge organically rather than imposing external constructs.

Following open coding, researchers advanced to axial coding, wherein categories are reassembled to understand relationships and linkages among them. This phase involves identifying conditions, contexts, actions/interactions, and consequences that shape the phenomena under study. Through memo-writing and theoretical sampling, researchers iteratively refine their categories, seeking data that elaborates or challenges emerging concepts.

Theoretical sensitivity (an awareness of subtle nuances in the data) guides this process, ensuring that the developing theory remains both empirically robust and conceptually coherent. The researcher's reflexivity and engagement with the field are critical, as they influence interpretive decisions and the depth of analysis.

At the final phase, selective coding, involves integrating and refining the core category that encapsulates the central phenomenon of the study. This category serves as the anchor for the emergent theory, linking all other categories into a cohesive explanatory framework.

Theoretical saturation is deemed achieved when additional data no longer yield new insights, implying the completion of the analytic process. The resulting theory is not merely descriptive but offers explanatory power, grounded in the lived experiences and contextual realities of participants.

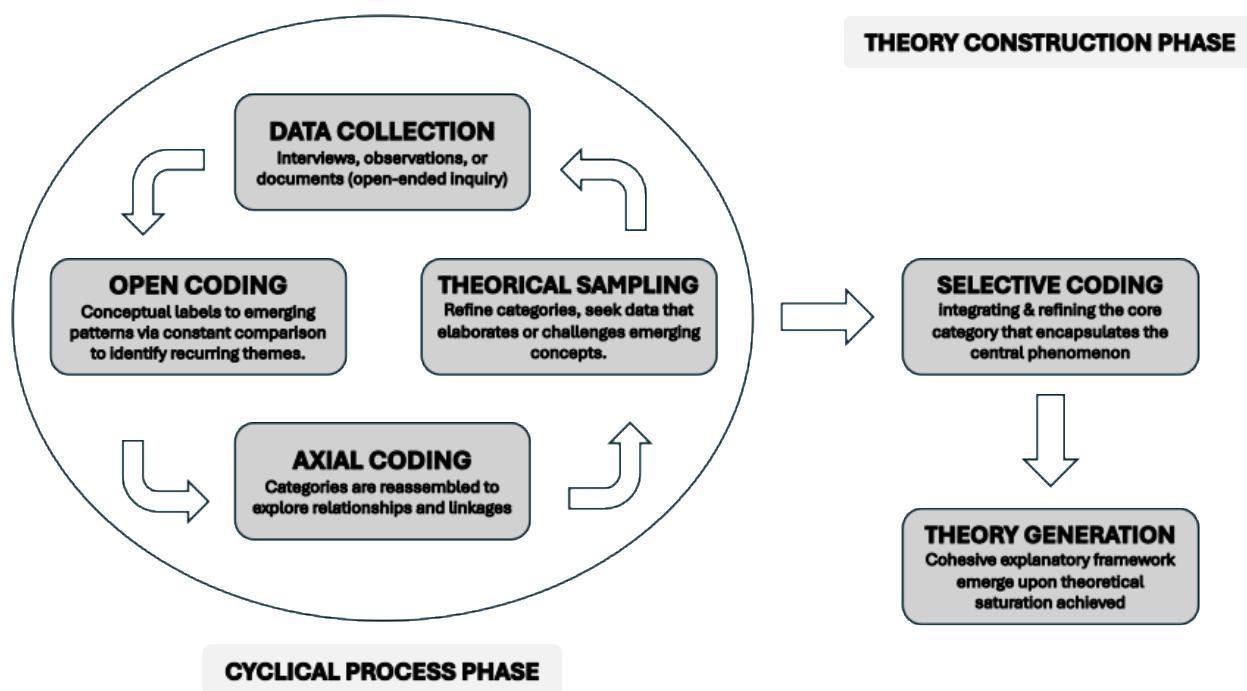


Figure 1. General Process of Grounded Theory Methodology

Source: Author Generated, 2025



While the core processes of GT remain broadly consistent, it does vary significantly across the three dominant paradigms: 1) *objectivist* (Glaser, 1978), 2) *postpositivist* (Strauss & Corbin, 1990), and 3) *constructivist* (Charmaz, 2006, 2025), each shaped by distinct ontological and epistemological assumptions. These paradigm distinctions influence not only how data is analyzed but also how theory is conceptualized, validated, and applied across disciplines (Table 2).

3. METHODOLOGY

3.1 Data Collection

This article utilized secondary data acquisition. The primary academic articles were obtained from Scopus, Web of Science (WOS), and Google Scholar from 2015 to 2025, and were published in English. The papers were selected through a process of selective sampling, based on relevant subjects and keywords. Plagiarism and AI similarity were assessed using Grammarly, following the guidelines of Siripipatthanakul et al. (2025).

The keywords are Grounded Theory, Qualitative Research methodology, Theory Generation, and Inductive Reasoning.

This article employed a systematic review using the PRISMA method following the recommendation of Asrifan et al. (2025). There are four steps as follows;

Step 1: Identifying the Problem - Manual searches, literature databases, or alternative methods may be employed to locate early entries. The initial phase of this study involved the random selection of the topic. The referenced article contains 309 papers.

Step 2: Screening - This phase involves identifying the residual records after duplicates have been eliminated. At this juncture, recognized record titles and abstracts are assessed for their pertinence to the study's subject or objectives. The second phase involved intentional sampling of scholarly articles from Google Scholar, Scopus, and Web of Science. This phase identified sixty-five papers.



Step 3: Eligibility - This step delineates the study's scope attainable following the screening process. In this phase, essential information articles are assessed for eligibility. In Phase Three, thirty papers were chosen for systematic study using a selective approach. The chosen papers employed AI, Grammarly, Turnitin, and Word Cloud terminology from 2021 to 2025.

Step 4: Inclusions - This phase offers a comprehensive examination of systematic review research. These studies fulfill the standards for subsequent examination. The flowchart illustrates the extent of study termination at each stage and the reasons for it. Common reasons for exclusion include irrelevance to the research topic, poor study design, insufficient data, or inappropriate inclusion criteria. The fourth step was conducted by three academic experts utilizing PRISMA. The content analysis confirmed the accuracy of the systematic review.

3.3 Data Analysis

The data were analyzed using content analysis and thematic analysis, based on previous studies, to support the article's content, discussions, and conclusions.

4. RESULTS

4.1 GT Process

Table 2. GT Process

GT Process Stage	Objectivist GT (Glaser, 1978)	Postpositivist GT (Strauss & Corbin, 1990)	Constructivist GT (Charmaz, 2006, 2025)
Data Collection	<ul style="list-style-type: none"> - Theoretical sampling based on emerging categories - Minimal researcher framing 	<ul style="list-style-type: none"> - Purposeful sampling guided by research questions and evolving codes 	<ul style="list-style-type: none"> - Flexible, iterative sampling - Emphasizes participant voice and context
Coding Approach	<ul style="list-style-type: none"> - Substantive and theoretical coding - Avoids predefined categories 	<ul style="list-style-type: none"> - Structured coding: open → axial → selective - Uses coding paradigms to relate categories 	<ul style="list-style-type: none"> - Initial and focused coding - Encourages <i>in vivo</i> codes and interpretive depth
Memo Writing	<ul style="list-style-type: none"> - Analytical memos track category development and theoretical saturation 	<ul style="list-style-type: none"> - Memos used to elaborate relationships and refine coding structure 	<ul style="list-style-type: none"> - Reflexive memos capture researcher insights, emotional responses, and co-constructed meanings
Category Development	<ul style="list-style-type: none"> - Categories emerge inductively from data - Emphasis on conceptual abstraction 	<ul style="list-style-type: none"> - Categories are refined through coding structure and paradigm logic 	<ul style="list-style-type: none"> - Categories are shaped through interaction and interpretation - Context-sensitive
Theory Construction	<ul style="list-style-type: none"> - Theory is discovered from data - Researcher remains distant 	<ul style="list-style-type: none"> - Theory is grounded but shaped by analytic procedures and researcher insight 	<ul style="list-style-type: none"> - Theory is constructed through dialogue and reflexivity - Embraces multiple realities

Role of Reflexivity	<ul style="list-style-type: none"> - Limited; researcher neutrality is emphasized 	<ul style="list-style-type: none"> - Acknowledged; researcher's influence is considered but managed 	<ul style="list-style-type: none"> - Central; researcher's positionality and interpretive lens are integral to the process
Use of Literature	<ul style="list-style-type: none"> - Delayed until after theory emergence to avoid contamination 	<ul style="list-style-type: none"> - Used to guide coding and category refinement 	<ul style="list-style-type: none"> - Engaged throughout as part of interpretive dialogue
Outcome Focus	<ul style="list-style-type: none"> - Abstract, generalizable theory 	<ul style="list-style-type: none"> - Mid-range theory applicable to practice and policy 	<ul style="list-style-type: none"> - Contextualized, situated theory reflecting lived experience

5. DISCUSSION

5.1 GT Adoptions In Academic Studies

GT has been widely adopted across diverse academic disciplines due to its methodological strength in generating theory from empirical data, particularly in contexts where existing frameworks are insufficient or absent. In social sciences studies, GT facilitates a nuanced understanding of social processes, identity construction, and cultural practices (Nayar & Stanley, 2015; Austin, 2016; Johnson, 2017; Zhang et al., 2017). For instance, Mousavi et al. (2019) conducted a grounded theory study that revealed the process of gender identity development among Iranian female adolescents. Nayar & Clair (2020) developed a cross-cultural GT study of Chinese, Indian, and Korean senior immigrants' contribution to New Zealand society, which revealed the challenges, learnings, and benefits of undertaking such research, and recommendations were put forth for developing the use of a GT methodology in cross-cultural studies.

In health and medical research (the origin of the earliest GT studies), it underpins explorations of patient experiences, professional ethics, and healthcare delivery models in recent years (Foley & Timonen, 2015; Jørgensen et al., 2018; Sinclair et al., 2018; Williams et al., 2022). For instance, Higginbotham et al. (2021) explored how healthcare professionals in an acute medical setting make decisions when managing the care of patients diagnosed with end-stage heart failure, and



how these decisions directly impact the patient's end-of-life experience, using a constructivist grounded theory approach. This study provides a theoretical framework to explain a 'vicious cycle of care' for patients diagnosed with end-stage heart failure.

In Kelley et al.'s (2022) constructivist grounded theory study, the researchers explored nurses' experiences and perceptions at selected healthcare sites in the United States during the COVID-19 pandemic. The study revealed and suggested that awareness of frontline nurses' complex and interrelated needs may help healthcare organisations protect their human resources. The study suggested that a theory provides preliminary theoretical support for future research and interventions aimed at addressing the needs of frontline nurses.

Educational researchers employ GT to examine pedagogical adaptation, curriculum development, and inclusive learning environments (Derbyshire et al., 2015; Grier-Reed et al., 2018; Baker-Korotkov, 2019; Ruppar et al., 2020). In recent notable studies, Ilias et al. (2019)'s constructive GT study revealed that resilience develops synergistically and dynamically from both risk and protective experiences across different levels. The findings motivated the development of a theoretical model of resilience that can enhance the health and education professionals to tailor assessments and interventions for parents of children with Autism Spectrum Disorder (ASD) in the Malaysian context.

In a separate note, Yousefi et al. (2020) investigated the professional development of elementary school principals in West, East, Ardabil, and Zanjan provinces, employing GT, and developed paradigmatic model or ideal pattern of school principal professional development in six main categories: Casual Conditions (Empowerment, Policies), Core Category (school principal professional development), and Context Conditions (Environment).

Hammar Chiriac et al. (2023) study using a constructivist GT framework explores and analyzes teachers' perspectives on factors influencing the school climate, to better understand teachers' everyday efforts in influencing the school climate, including obstacles they might experience. The findings revealed four types of factors that affected the quality of the school climate. A GT of teachers' perceptions of factors influencing schools was developed.

In business and management studies, GT studies are popular in theories of organizational behaviour, leadership dynamics, and consumer decision-making (Fusco et al., 2015; Sharma et al., 2020; Koleva, 2023; Khan & Khan, 2024). Bakhtiar et al. (2020) employed a qualitative approach using the Postpositivist GT to develop a model explaining the buying behaviour of life insurance in economic, social, cultural, and micro or individual contexts in Iran. The model suggests that communication and interactions play a fundamental role in life insurance buying behavior.



Al-Dabbagh (2020) conducted a GT study aimed at detecting the role of decision-makers in crisis management, revealing the crisis decision-making process, its skills, strategies, and stages, as well as assessing crisis management. The study revealed that there are eight concepts that contribute to a comprehensive theory of crisis decision-making processes. These findings led to the development of a theory that explains the crisis decision-making process and its associated skills and strategies, benefiting decision-makers in making the necessary decisions to confront crises such as the COVID-19 pandemic.

GT also provides a critical academic role in development and policy research, offering insights into policy analysis, stakeholder engagement, and institutional reform (McCall & Edwards, 2021; Pashsyee et al., 2021; Sebeelo, 2022; Qi & Ong, 2023; Zeng & Yu, 2024). For instance, the GT method was adopted for Rochette et al.'s (2023) study, which centered on the COVID-19 pandemic phenomenon and public health policies and management in France. The study establishes a methodological foundation for analyzing coordination dynamics and reveals a crisis-driven reevaluation of stakeholder relationships, identifying three levels of implementation of health policies (administrative, organizational, and operational) and highlighting different types of coordination specific to each of these levels. The findings offer valuable insights into how to more effectively coordinate and implement healthcare policies during a crisis.

Zhang et al. (2020) justified the merits of GT as the research method for qualitative exploratory analysis in the context of the Green Logistics Policies (GLP) study. This study further argues that the diversity of factors that can potentially influence the GLP is too vague, thus imposing challenges to the traditional hypothesis testing approach. Furthermore, the relationship between the effectiveness of GLP and its influencing factors is complex; therefore, quantitative research may not be effective in explaining the phenomenon.

Madani et al. (2024) employed the postpositivist GT approach in the study, which investigates and identifies the dimensions, components, and indicators of healthy governance in the context of public policy, which is fundamental and exploratory. The study claimed the achievement of theoretical saturation, which suggests the important role of healthy governance in creating innovative and new forms of collective action with the aim of solving complex public policy issues, contributing to public knowledge, providing effective public services, sustainable and citizen-oriented development, which is a collection of results from the evolution of governance.

While GT is originally rooted in social science studies, it has found increasing relevance in technology and engineering fields, particularly in artificial intelligence (AI), human-computer interaction, and agile software development (Razali et al., 2020; Hoda, 2021a, 2021b, 2024). Its

adaptability to both qualitative and mixed-methods designs offers its value as a robust tool for theory construction across disciplinary boundaries (Bastan et al., 2022).

For instance, Taherizadeh & Beaudry (2023) studied to identify the key dimensions of AI-driven digital transformation (AIDT) and develop a GT that provides a rich and nuanced understanding of how the AIDT process unfolds within Canadian SMEs. The study reveals that the AIDT process is shaped by the interplay of five core dimensions, which foster several theoretical and managerial implications.

Pérez et al (2022) studied understanding what the industry perceived about Internet of Things edge computing, and the expected benefits and challenges associated with this paradigm using a constructivist GT method. The study proposes a substantive and analytical framework for understanding what companies perceive as the benefits and challenges of IoT edge computing. Additionally, the testing theory phase demonstrates that the results align with the ISO/IEC TR 30164 standard.

GT has also gained traction in tourism theme research due to the sector's dynamic, interrelated, and often dynamic nature. Tourism scholars have embraced GT for its capacity to uncover latent patterns and stakeholder responses in domains with limited prior study, such as the impact of crises, including pandemics, natural disasters, and geopolitical disruptions (Seyfi & Hall, 2022; Matteucci & Gnoth, 2017). The method's inductive logic and iterative design make it especially valuable for understanding how tourism systems adapt and evolve under pressure.

5.2 Advocates and Critiques of GT

Over the years, GT has garnered both commendable advocacy and pointed critique since its inception. As a methodology, it has evolved through multiple paradigmatic interpretations, each contributing to its richness and complexity.

5.2.1 Advocacy

Proponents of grounded theory emphasize its capacity to generate theory directly from empirical data, making it particularly valuable in exploratory and applied research contexts. Glaser and Strauss (1967) originally positioned GT as a counterpoint to deductive methods, arguing that theory should emerge from the data rather than be imposed upon it.



Charmaz (2006) highlights GT's interpretive flexibility and capacity to capture multiple social realities. Corbin and Strauss (2015) emphasize GT's systematic coding procedures and its utility in uncovering complex social processes. Bryant and Charmaz (2007) underscore the relevance of GT in both traditional and postmodern paradigms, noting its ability to bridge positivist rigor with interpretivist depth. In applied fields such as health research, Milliken and Schreiber (2012) affirm the suitability of GT for exploring meaning-making in clinical and organizational settings.

5.2.2 Critique

Despite its strengths, grounded theory has faced substantial critique. Hughes and Jones (2000) reflect widespread confusion over its procedures and philosophical foundations. Allen (2010) critiques four major GT texts—those by Glaser and Strauss, Strauss and Corbin, Charmaz, and Clarke—highlighting inconsistencies in the emergence of theory and coding.

Suddaby (2006) cautions against the misuse of GT as a generic label for qualitative research, arguing that many studies fail to adhere to its core principles. Levers (2013) critiques GT's philosophical tensions between postpositivist origins and constructivist adaptations, introducing a typology of emergence to illustrate divergent interpretations. Nelson (2010) reflects on the challenges of using GT in doctoral research, calling for a more pragmatic and reflexive approach.

5.3 Methodological Discipline And Caution For Novice Researchers

Conducting GT research demands a high level of methodological discipline, particularly for novice researchers who may be drawn to its flexibility but underestimate its rigor. While GT offers an open-ended and inductive pathway to theory development, its credibility hinges on strict adherence to its core procedures and philosophical coherence.

Novice researchers are often tempted to confuse GT as a loosely structured thematic analysis, overlooking essential disciplines such as theoretical sampling, constant comparison, and memo writing. As Suddaby (2006) highlighted, many studies labeled as GT often fail to meet its methodological standards, resulting in superficial findings and conceptual drift. This misapplication not only undermines the research's validity but also contributes to widespread confusion about what constitutes authentic GT practice.

Allen (2010) highlights that even among foundational texts, inconsistencies in coding procedures and the emergence of theory can be detected, which can be disorienting for novice scholars. Without clear guidance, novice researchers may struggle to navigate the iterative nature of GT, leading to premature closure or forced categorization. Hughes and Jones (2000) emphasize the need for structured training and mentorship.



To conduct GT responsibly, it is pivotal for researchers (especially new GT researchers) to observe the following disciplines:

- Clearly identify the variant of GT being employed and align all procedures accordingly (Charmaz, 2006; Levers, 2013).
- Allow data collection to be guided by emerging concepts, not convenience or saturation assumptions (Glaser & Strauss, 1967).
- Systematically compare data segments to refine categories and develop theoretical density (Corbin & Strauss, 2015).
- Maintain detailed memos to track conceptual development, researcher reflexivity, and decision trails (Bryant & Charmaz, 2007).
- Avoid declaring saturation prematurely; ensure that categories are fully developed and integrated (Nelson, 2010).

For novice researchers, it is crucial to engage in methodological training, seek peer debriefing, and consult experienced supervisors to ensure fidelity to GT principles. When conducted with discipline and reflexivity, GT can yield rich, contextually grounded insights that contribute meaningfully to both theory and practice.

5.4 Artificial Intelligence on GT Methodology

The intersection of AI and GT presents a promising methodological frontier for exploring emergent phenomena in technologically mediated contexts. As AI systems increasingly permeate domains such as education, journalism, and software engineering, GT offers a robust framework for capturing practitioner experiences, ethical tensions, and socio-technical transformations from the ground up.

For instance, Pretorius and Cahusac de Caux (2025) employed a constructivist GT approach to develop an AI literacy framework in higher education, revealing how educators adapt to generative AI through reflexive engagement and evolving pedagogical practices. Similarly, Pant et al. (2024) conducted a grounded theory literature review to synthesize the perspectives of AI practitioners on ethics, resulting in a taxonomy that informs ethical design and governance in AI development. These studies demonstrate GT's capacity to generate context-sensitive theory that reflects the lived realities of stakeholders navigating the complexities of AI integration.

6. CONCLUSION

GT indeed offers a robust framework for qualitative research, particularly in contexts where understanding lived experience and emergent meaning is the primary objective. Its philosophical roots in symbolic interactionism provide a coherent framework for exploring how individuals construct reality through social interaction. However, its application must be approached with caution.

6.1 The Procedure of GT is shown in Figure 2.

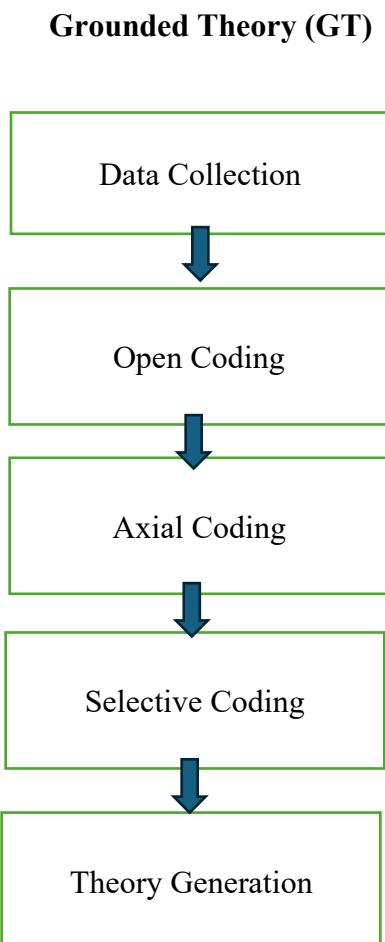


Figure 2. Grounded Theory Procedure



6.2 Comparison between Grounded Theory and Variable-Based Approach

Aspect	Grounded Theory	Variable-Based Approach
Theory Status	Emergent	Established
Starting Point	Data	Theory
Flexibility	High	Moderate
Generalizability	Low (contextual)	Higher (if well-designed)
Instrument Design	Emerges from data	Pre-designed using defined variables

Grounded Theory and variable-based research primarily differ in their objectives and methodologies: Grounded Theory is an inductive methodology that formulates new theories from unrefined qualitative data, devoid of predetermined conceptions, rendering it advantageous for investigating under-explored or intricate social processes. Conversely, a variable-based method is deductive, depending on well-defined variables and theoretical frameworks to test hypotheses, quantify correlations, and validate existing models, hence improving precision, replicability, and comparability across research. Grounded Theory gives flexibility and discovery, whereas variable-based research offers clarity and structure; thus, the decision hinges on the objective of either developing new insights or testing and expanding existing knowledge.

7. LIMITATIONS AND RECOMMENDATIONS

Despite these cautions, grounded theory remains a powerful tool when applied with methodological discipline and contextual awareness. Its strength lies in its ability to uncover latent patterns, stakeholder perspectives, and culturally embedded meanings, especially in under-researched or rapidly evolving domains.

By acknowledging its limitations and embracing methodological discipline, researchers can harness the strengths of grounded theory while avoiding its common pitfalls. When integrated thoughtfully (especially within mixed methods designs), GT can illuminate complex social



processes, inform policy development, and support culturally sensitive, stakeholder-driven research.

In mixed methods research, GT can be strategically adopted during the exploratory phase to surface emergent themes, which can then facilitate the design of quantitative instruments or policy frameworks (Creswell & Plano Clark, 2018). This hybrid approach enhances both depth and generalizability, aligning with institutional demands for rigor and responsiveness.

GT is particularly valuable in local empowerment initiatives, where understanding community narratives and informal governance structures is essential. Milliken and Schreiber (2012) demonstrate how GT, grounded in symbolic interactionism, can illuminate the lived experiences of stakeholders in healthcare and organizational settings.

REFERENCES

Al-Dabbagh, Z. S. (2020). The role of decision-maker in crisis management: A qualitative study using grounded theory (COVID-19 pandemic crisis as a model). *Journal of Public Affairs*, 20(4), e2186.

Allen, L. M. (2010). A critique of four grounded theory texts. *The Qualitative Report*, 15(6), 1606–1620. <https://doi.org/10.46743/2160-3715/2010.1365>

Aloudat, A. S. (2025). Grounded Theory. In *Encyclopedia of Tourism* (pp. 455-456). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-030-74923-1_443

Asrifan, A., Siripipatthanakul, S., Alaqad, M. H., Saodi, S., & Sadaruddin, S. (2025). Managing Privacy and Security in Research: Effective Practices and Strategies. In *Privacy and Security Management Practices for Organizations* (pp. 151-182). IGI Global Scientific Publishing. DOI: 10.4018/979-8-3693-9720-6.ch006

Austin, A. (2016). “There I am”: A grounded theory study of young adults navigating a transgender or gender nonconforming identity within a context of oppression and invisibility. *Sex Roles*, 75(5), 215-230.

Baker-Korotkov, K. (2019). A constructivist grounded theory study of interconnected frameworks



of healthy and inclusive schools.

Bakhtiar Nasrabadi, H., Hasangholipour Yasouri, T., Mira, S. A., & Vedadhir, A. A. (2020). Developing a Model of Consumer behavior in Life Insurance: A study based on Grounded Theory. *Consumer Behavior Studies Journal*, 7(1), 217-244.

Bastan, M., Zarei, M., Tavakkoli-Moghaddam, R., & G, H. S. (2022). A new technology acceptance model: a mixed-method of grounded theory and system dynamics. *Kybernetes*, 51(1), 1-30.

Blumer, H. (1969). *Symbolic interactionism: Perspective and method*. Prentice-Hall.

Bryant, A., & Charmaz, K. (Eds.). (2007). *The SAGE handbook of grounded theory*. Sage Publications.

Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Sage Publications.

Charmaz, K. (2025). *Constructing grounded theory* (3rd ed.). SAGE Publications. ISBN: 978-1-5264-2660-4

Chun Tie, Y., Birks, M., & Francis, K. (2019). Grounded theory research: A design framework for novice researchers. *SAGE Open Medicine*, 7, 2050312118822927. <https://doi.org/10.1177/2050312118822927>

Corbin, J., & Strauss, A. (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (4th ed.). Sage Publications.

Coşkun, K. (2020). A new explanation for the conflict between constructivist and objectivist grounded theory. *International Journal of Qualitative Methods*, 19, 1–5. <https://doi.org/10.1177/1609406920938280>

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). Sage Publications.

Derbyshire, J. A., Machin, A. I., & Crozier, S. (2015). Facilitating classroom-based interprofessional learning: A grounded theory study of university educators' perceptions of their role adequacy as facilitators. *Nurse education today*, 35(1), 50-56.



Foley, G., & Timonen, V. (2015). Using grounded theory method to capture and analyze health care experiences. *Health services research*, 50(4), 1195-1210.

Fusco, T., O'Riordan, S., & Palmer, S. (2015). Authentic Leaders are... Conscious, Competent, Confident, and Congruent: A Grounded Theory of Group Coaching and Authentic Leadership Development. *International Coaching Psychology Review*, 10(2).

Glaser, B. G. (1978). Theoretical sensitivity: Advances in the methodology of grounded theory. Sociology Press.

Glaser, B. G., & Strauss, A. L. (1965). Awareness of dying. Aldine Publishing Company.

Glaser, B. G., & Strauss, A. L. (1967). The discovery of grounded theory: Strategies for qualitative research. Aldine Publishing Company.

Grier-Reed, T., & Williams-Wengerd, A. (2018). Integrating universal design, culturally sustaining practices, and constructivism to advance inclusive pedagogy in the undergraduate classroom. *Education Sciences*, 8(4), 167.

Hammar Chiriac, E., Forsberg, C., & Thornberg, R. (2023). Teachers' perspectives on factors influencing the school climate: a constructivist grounded theory case study. *Cogent Education*, 10(2), 2245171.

Higginbotham, K., Jones, I., & Johnson, M. (2021). A grounded theory study: Exploring health care professionals decision making when managing end stage heart failure care. *Journal of advanced nursing*, 77(7), 3142-3155.

Hoda, R. (2021a). Decoding grounded theory for software engineering. In 2021 IEEE/ACM 43rd International Conference on Software Engineering: Companion Proceedings (ICSE-Companion) (pp. 326-327). IEEE.

Hoda, R. (2021b). Socio-technical grounded theory for software engineering. *IEEE Transactions on Software Engineering*, 48(10), 3808-3832.

Hoda, R. (2024). Qualitative research with socio-technical grounded theory. Springer.

Hughes, J., & Jones, S. (2000). Grounded theory: Never knowingly understood. *Information*

Systems Review, 1, 181–197.

Ilias, K., Cornish, K., Park, M. S. A., Toran, H., & Golden, K. J. (2019). Risk and resilience among mothers and fathers of primary school age children with ASD in Malaysia: A qualitative constructive grounded theory approach. *Frontiers in Psychology*, 9, 2275.

Johnson, M. R. (2017). Understanding College Students' Civic Identity Development: A Grounded Theory. *Journal of Higher Education Outreach and Engagement*, 21(3), 31-59.

Jørgensen, K., Rendtorff, J. D., & Holen, M. (2018). How patient participation is constructed in mental health care: A grounded theory study. *Scandinavian Journal of Caring Sciences*, 32(4), 1359-1370.

Kelley, M. M., Zadvinskis, I. M., Miller, P. S., Monturo, C., Norful, A. A., O'Mathúna, D., ... & Chipps, E. (2022). United States nurses' experiences during the COVID-19 pandemic: A grounded theory. *Journal of Clinical Nursing*, 31(15-16), 2167–2180.

Khan, M. I., & Khan, A. N. (2024). Exploring Management Practices and Theories through Grounded Theory: A Review. *Journal of Policy Options*, 7(3), 39-46.

Koleva, P. (2023). Critical analysis of grounded theory strategy in organisational and management research. *Qualitative Research Journal*, 23(3), 258-272.

Levers, M. J. D. (2013). Philosophical paradigms, grounded theory, and perspectives on emergence. *SAGE Open*, 3(4), 1–6. <https://doi.org/10.1177/2158244013517243>

Madani, J., Zarandi, S., & Javadi Sheikh Ahmad, A. (2024). The Evolution of Sound Governance in the Context of Public Policy Making: Utilizing a Grounded Theory Approach. *Journal of Exalted Governance*, 5(1), 111-133.

Matteucci, X., & Gnoth, J. (2017). Elaborating on grounded theory in tourism research. *Annals of Tourism Research*, 65, 49-59.

McCall, C., & Edwards, C. (2021). New perspectives for implementing grounded theory. *Studies in Engineering Education*, 1(2).

Mead, G. H. (1934). *Mind, self, and society: From the standpoint of a social behaviorist* (C. W. Morris, Ed.). University of Chicago Press.



Milliken, P. J., & Schreiber, R. S. (2012). Examining the nexus between grounded theory and symbolic interactionism. *Qualitative Health Research*, 22(11), 1459-1470. <https://doi.org/10.1177/1049732312450361>

Mousavi, M. S., Shahriari, M., Salehi, M., & Kohan, S. (2019). Gender identity development in the shadow of socialization: a grounded theory approach. *Archives of women's mental health*, 22(2), 245-251.

Nayar, S., & Clair, V. W. S. (2020). Multiple cultures—one process: Undertaking a cross cultural grounded theory study. *American Journal of Qualitative Research*, 4(3), 131-145.

Nayar, S., & Stanley, M. (2015). Occupational adaptation as a social process in everyday life. *Journal of Occupational Science*, 22(1), 26-38.

Nelson, J. (2010). Navigating grounded theory: A critical and reflective response to the challenges of using grounded theory in an education PhD. Academia.edu. https://www.academia.edu/15250439/Navigating_grounded_theory_a_critical_and_reflective_response_to_the_challenges_of_using_grounded_theory_in_an_education_PhD

Niasse, N. (2022). Dealing with literature review and epistemological underpinnings in grounded theory methodology. *International Journal of Qualitative Research*, 2(2), 159-164.

Niasse, N. (2023). Limiting misleading ideas about the history of grounded theory methodology. *International Journal of Qualitative Methods*, 22, 16094069221149486.

Pant, A., Hoda, R., Tantithamthavorn, C., & Turhan, B. (2024). Ethics in AI through the practitioner's view: A grounded theory literature review. *Empirical Software Engineering*, 29, Article 67. <https://doi.org/10.1007/s10664-024-10465-5>

Pashsyee, J., Talebi, B., & Daneshvar, Z. (2021). School Human Resource Development's Policymaking Model: A Grounded Theory Study. *School Administration*, 9(4), 148-161.

Pérez, J., Díaz, J., Berrocal, J., López-Viana, R., & González-Prieto, Á. (2022). Edge computing: A grounded theory study. *Computing*, 104(12), 2711-2747.

Pretorius, L., & Cahusac de Caux, B. (2025). The AI literacy framework for higher education: A



grounded theory exploration of the foundational, social, conceptual, ethical, and affective domains of AI literacy. In J. D. DeHart, S. Abas, R. A. Mora, & D. G. Pyles (Eds.), *Reimagining Literacy in the Age of AI: Theory and Practice* (pp. 11–32). CRC Press.
<https://doi.org/10.1201/9781003510635-3>

Qi, H., & Ong, F. (2023). Stakeholders in the greening process of business events: A constructivist grounded theory to the Chinese context. *Event Management*, 27(1), 1-17.

Ralph, N., Birks, M., & Chapman, Y. (2015). The methodological dynamism of grounded theory. *International Journal of Qualitative Methods*, 14(4), 1–6.
<https://doi.org/10.1177/1609406915611576>

Razali, R., Alqudah, M. K., & Zainal, D. A. P. (2020). The discovery of grounded theory practices for software engineering research. *Electronic Journal of Business Research Methods*, 18(2), pp153-165.

Rochette, C., Mériade, L., & Cassière, F. (2023). A grounded theory-based qualitative approach for examining local implementation of public health policies during crises. *MethodsX*, 11, 102439.

Ruppar, A. L., Knight, V. F., McQueston, J. A., & Jeglum, S. R. (2020). Involvement and progress in the general curriculum: A grounded theory of the process. *Remedial and Special Education*, 41(3), 152–164.

Sebeelo, T. B. (2022). The Utility of Constructivist Grounded Theory in Critical Policy Analysis. *International Journal of Qualitative Methods*, 21, 16094069221090057.

Seyfi, S., & Hall, C. M. (2022). Applying grounded theory in hospitality and tourism research: Critical reflections. In *Contemporary research methods in hospitality and tourism* (pp. 253-268). Emerald Publishing Limited.

Sharma, A., Joshi, R. M., & Wali, O. P. (2020). Human Capital: A Key Driver of Consumer Decision-making in Online Promotion (An Application of Grounded Theory in Exploratory Research). *Asia-Pacific Journal of Management Research and Innovation*, 16(2), 132-145.

Sinclair, S., Hack, T. F., Raffin-Bouchal, S., McClement, S., Stajduhar, K., Singh, P., ... & Chochinov, H. M. (2018). What are healthcare providers' understandings and experiences of compassion? The healthcare compassion model: a grounded theory study of healthcare providers in Canada. *BMJ open*, 8(3), e019701.



Siripipatthanakul, S., Phuangsuwan, P., & Jaipong, P. (2025). Mobile Application Security: A Case Study of Bank of Ayudhya PCL.(KMA), Thailand. In *International Conference on Data Processing and Networking* (pp. 479-493). Springer, Singapore.
https://doi.org/10.1007/978-981-96-3102-5_36

Strauss, A., & Corbin, J. (1990). Basics of qualitative research: Grounded theory procedures and techniques. Sage Publications.

Suddaby, R. (2006). What grounded theory is not. *Academy of Management Journal*, 49(4), 633–642. <https://doi.org/10.5465/amj.2006.22083020>

Taherizadeh, A., & Beaudry, C. (2023). An emergent grounded theory of AI-driven digital transformation: Canadian SMEs' perspectives. *Industry and Innovation*, 30(9), 1244-1273.

Williams, T., Wiles, J., Smith, M., & Ward, K. (2022). Combining action research and grounded theory in health research: A structured narrative review. *SSM-Qualitative Research in Health*, 2, 100093.

Yousefi, A., Maleki, A. S., & Talebi, B. (2020). Designing a model for professional development of elementary school principals in 2025 horizon with an approach based on grounded theory. <https://www.sid.ir/paper/395961/en>

Zeng, Z., & Yu, X. (2024). The connotation, cause, and reform path of institutional transaction costs: a grounded theory analysis. *Local Government Studies*, 50(5), 893-914.

Zhang, J., Tucker, H., Morrison, A. M., & Wu, B. (2017). Becoming a backpacker in China: A grounded theory approach to identity construction of backpackers. *Annals of Tourism Research*, 64, 114-125.

Zhang, W., Zhang, M., Zhang, W., Zhou, Q., & Zhang, X. (2020). What influences the effectiveness of green logistics policies? A grounded theory analysis. *Science of the Total Environment*, 714, 136731.