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Article

Philosophical and methodological dimensions of grounded theory in architectural research: Content analysis of Turkish doctoral dissertations

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ABSTRACT

Grounded theory, originally developed in the social sciences as a systematic method for generating theory from data, has evolved into a flexible and philosophically diverse approach applied across multiple disciplines. Although its potential for theory-building aligns well with the needs of architectural research, its use within the field remains limited and often methodologically inconsistent. This study critically examines how grounded theory has been applied and adapted in architectural research by analyzing eleven doctoral dissertations completed in Türkiye between 2015 and 2024. Using content analysis, the dissertations were systematically evaluated across eight categories, including method, aim, data set, data collection techniques, data coding, data display, engaging with grounded theory literature and coding process transparency. The findings reveal three overarching themes that characterize the current use of grounded theory in Turkish architectural research: methodological adaptation and philosophical pluralism, knowledge construction through multi-layered data practices, and the need for analytical transparency. While the dissertations demonstrate the method's adaptability, they also highlight recurring issues such as terminological ambiguity, fragmented coding strategies, and insufficient engagement with core grounded theory processes including theoretical sampling, constant comparison, and theoretical saturation. By identifying methodological gaps and emerging tendencies, this study contributes to defining a clearer and more coherent framework for the future use of grounded theory in architecture.

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INTRODUCTION

Glaser & Strauss introduced grounded theory in their 1967 book, The Discovery of Grounded Theory. It was developed in the social sciences as a systematic research method for generating theory from data. Unlike traditional qualitative research methods that derive hypotheses from pre-existing theories, grounded theory proposes a clearly defined, three-stage process of data analysis, adopting an inductive approach to generate theory directly from empirical evidence. This method enables the construction of new theoretical insights without reliance on quantitative techniques (Charmaz, 2006). Over time, grounded theory has evolved into a more flexible framework, inspiring new methodological innovations in qualitative research.

Architecture's complex interplay of human experience, emotion, perception, cultural meaning, and daily life provides a fertile context for the application of grounded theory. The method's capacity to integrate empirical, experiential, and subjective data within a systematic analytical framework enables researchers to capture dimensions of architectural phenomena that are difficult to articulate through conventional approaches. Through its iterative and relational logic, grounded theory can reveal social, linguistic, experiential, conceptual, and symbolic patterns embedded in design processes—patterns that often remain implicit or overlooked in traditional research models. In this respect, grounded theory offers a valuable means of accessing and theorizing architecture's tacit knowledge, thereby deepening our understanding of the field's multifaceted nature.

Although grounded theory offers a strong potential for architectural research, its application within the discipline remains inconsistent. Adapting a method originally developed in the social sciences inevitably poses both conceptual and practical challenges. In architectural research, grounded theory is often employed without full awareness of its philosophical foundations or systematic coding procedures, resulting in partial implementations. Moreover, formal training in grounded theory is uncommon among architectural researchers, and only a few postgraduate programs provide comprehensive instruction in qualitative methodologies. This gap contributes to a broader uncertainty about how the method can be meaningfully adapted to design-based inquiries. Furthermore, there is a notable absence of studies in literature that explain or offer a coherent framework for applying grounded theory in architecture.

The primary aim of this study is to critically examine how grounded theory is understood and applied within architectural research, emphasizing both its methodological challenges and potential contributions. The study seeks to examine the philosophical and methodological foundations of the method to develop critical, reflective, and context-sensitive methodological awareness for architectural research. Grounded theory prioritizes theory generation over simply organizing data or offering superficial interpretations, making it especially suitable for doctoral-level research due to its methodological rigor and capacity for new conceptual insights. Accordingly, this study analyzes doctoral dissertations completed in Türkiye between 2015 and 2024 that explicitly use grounded theory.

The dissertations were systematically analyzed using eight criteria. These include method (the methodological framework used), aim (the study's intended outcome), data set (sources of data), data collection (techniques used to gather data), data coding (procedures for coding and analysis), data display (how results are presented), grounded theory literature (depth of theoretical engagement), and coding process transparency (clarity of methodological reporting). These categories form a framework for comparing the dissertations, allowing a systematic evaluation of their philosophical positioning, methodological rigor, and analytical clarity in applying grounded theory to architectural research.

The content analysis identifies three central themes shaping the use of grounded theory in architectural research: methodological adaptation and philosophical diversity, multi-layered data practices, and the need for analytical transparency. Together, these themes illuminate the underlying dynamics of how grounded theory is currently interpreted and operationalized within the discipline. They also enable the identification of recurring methodological tendencies, epistemological orientations, and patterns of application, revealing where researchers innovate, where they struggle, and where gaps persist.

The originality of this study lies in its focus on how grounded theory has been interpreted within architectural design research, rather than merely explaining what the method is. It is not simply a literature review, but a systematic and critical analysis of doctoral dissertations that employ grounded theory within the Turkish architectural context. By examining how the method is operationalized in practice, the study provides a comprehensive picture of current methodological tendencies, epistemological orientations, and emerging challenges. So, it contributes to defining a clearer and more reflective framework for the future use and development of grounded theory in architecture.

KEY CONCEPTS AND RECENT SHIFTS OF GROUNDED THEORY

Glaser & Strauss outlined clear procedures for data collection and analysis by providing practical methodological guidelines that connect data and theory (Charmaz, 2006). Grounded theory employs a cyclical, reflexive process that involves data collection, coding, memo writing, and theory development. Researchers move between these stages,

refining concepts and categories as new insights emerge through constant comparison. This recursive structure ensures that theoretical outcomes stay closely grounded in empirical evidence and allows for continuous reinterpretation and conceptual growth.

As with all scientific studies, the study's objectives and research questions must be clearly defined before data collection. Grounded theory relies on qualitative data obtained through in-depth, semi-structured interviews, direct observations, documents, reports, media content, and other written materials. Data coding and analysis use systematic steps that transform raw data into theoretical concepts. The classical approach (Glaser & Strauss, 1967; Strauss & Corbin, 1990) uses open, axial, selective, and theoretical coding, emphasizing objectivity and the emergence of categories directly from data. In contrast, the constructivist approach (Charmaz, 2006) employs initial, focused, and theoretical coding, highlighting the researcher's interpretive role and the co-construction of meaning. Despite these methodological differences, each coding stage progressively refines data interpretation from descriptive categorization to conceptual integration ultimately culminating in the generation of theory.

The memo-writing stage sets grounded theory apart from other qualitative methods. Researchers document theoretical reflections with clear titles, dates, and continuous records, which helps connect codes and categories and identify conceptual gaps (Çelik & Ekşi, 2015). Theoretical sensitivity, shaped by prior experience, is vital in this process; it enhances the ability to recognize patterns and interpret data effectively (Strauss & Corbin, 1990). Another critical principle, theoretical saturation, is reached when additional data no longer yields new codes or insights, indicating that the analysis has captured the full conceptual scope of the phenomenon (Glaser & Strauss, 1967).

The method's strength lies in its capacity for theory building. Timonen et al. (2018) states that this method is typically used to understand a particular concept or conceptual framework thoroughly. Rather than merely compiling data, it enables the development of intermediate-level theories with conceptual depth. Grounded theory, specifically, provides a flexible yet rigorous framework for building substantive theories closely tied to participants' experiences and grounded in empirical evidence. These theories are inherently dynamic and context-sensitive, reflecting the involvement of multiple actors, interactions, and temporal dimensions. Table 1 highlights the key concepts of grounded theory with the definition and application in research phase to inform researchers.

Following the postmodern turn of the 1980s, creative fields such as media, art, film, and architecture adopted research perspectives that favored locality, fragmentation, contradiction, heterogeneity, and complexity over universality, generalization, rationality, and homogeneity (Clarke, 2003). In response, grounded theory evolved into two main strands -constructivist and situational grounded theory- each offering distinct approaches to addressing the needs of modern qualitative research.

Table 1. Key concepts of grounded theory.

Concept	Definition	Application in Research
Open / Initial Coding	The first phase of analysis involves line-by-line or segment-by-segment examination of data to identify significant ideas.	Generates initial codes representing participants' meanings and actions.
Axial / Focused Coding	A stage where codes are clustered and relationships among them are identified to form higher-level categories.	Clarifies central processes, causal relationships, and emerging patterns.
Selective / Theoretical Coding	The phase that integrates categories to form a coherent theoretical framework.	Leads to the identification of a core category that unites the analysis.
Memo Writing	The practice of documenting analytic reflections, theoretical notes, and conceptual linkages throughout the research process.	Promotes reflexivity and supports the construction of robust theoretical explanations.
Theoretical Sensitivity	The researcher's ability to perceive and interpret data meaningfully, shaped by experience and prior knowledge.	Increases analytical depth and ensures that emerging theories are contextually grounded.
Theoretical Saturation	The point at which additional data no longer generates new codes or insights.	Indicates the completeness and stability of developed categories.
Intermediate-Level Theory	A theory positioned between abstract grand theory and descriptive empirical findings.	Provides conceptual depth while remaining closely tied to the data.
Constant Comparison	A core analytic procedure involving the continuous comparison of data, codes, and categories.	Enables refinement of categories and discovery of relationships among concepts.

Charmaz (2016) proposed constructivist grounded theory, which encourages researchers to consider the ideological, social, and political contexts of the twenty-first century. Unique to this approach, data are viewed as open to multiple interpretations, and meaning is co-constructed through the interaction between researchers and participants. Constructivist grounded theory facilitates the connection between micro-level subjective experiences and macro-level social structures by emphasizing co-construction and context.

Clarke (2003, 2015) introduced situational grounded theory, which extends grounded theory by mapping social, discursive, and material relations. Situational maps visually illustrate the interconnections among actors and highlight the discursive, material, and spatial dimensions of research. Clarke's situational analysis responds to the need for analytical tools that depict positions and power relations, distinguishing itself from earlier grounded theory by expanding into post structural domains and emphasizing the complexity of relationality.

METHODOLOGICAL APPROACH AND SELECTION OF DISSERTATIONS

Grounded theory has evolved from its positivist origins toward more interpretive and context-sensitive orientations, accommodating a plurality of viewpoints and methodological nuances. These shifts have expanded the method's interpretive capacity and opened new possibilities for its application across diverse disciplines. Among these disciplines, architecture occupies a distinctive position. As a discipline that inherently integrates human experience, emotion, perception, and cultural meaning, architecture offers both significant opportunities and considerable challenges for adapting grounded theory.

Grounded theory is a well-established methodology in the social sciences. However, its application within design studies has not yet reached a comparable level of depth, partly because design remains a relatively young academic discipline when compared with fields such as physics, sociology, or philosophy (Friedman, 2003). Nevertheless, the use of grounded theory in architectural research has grown significantly since 2010. For instance, a comparison between the first (2002) and second (2013) editions of Groat and Wang's Architectural Research Methods shows a notable increase in pages devoted to grounded theory, reflecting its rising methodological value and relevance to architectural inquiry.

Doctoral dissertations serve as effective tools for tracing growth in new research fields, as they offer in-depth investigations in advanced degree programs. Compared to journal articles, dissertations often clarify methodological applications and research processes. Focusing dissertations using grounded theory reveals the shifting paradigms and innovative approaches underpinning the method's current and future trajectory. To understand the evolution of grounded theory in architecture, a systematic search of dissertations was conducted using ProQuest (a global collection of doctoral dissertations) and The Council of Higher Education (YÖK) (a database for dissertations in Turkiye).

In the ProQuest, a keyword search for "grounded theory" revealed that the highest number of dissertations appeared in the field of educational sciences, with lower counts in management, sociology, nursing, literature, psychology, and public health. By contrast, architecture had notably fewer dissertations using grounded theory. To refine the results for architecture specifically, the search combined "grounded theory" AND "architecture," resulting in approximately 500 dissertations, most completed after 2010. Most originated from institutions in the United States, followed by the United Kingdom, with Turkiye represented at a much lower rate.

A similar search strategy was applied to the Council of Higher Education (YÖK) database. Since multiple translations of the term are used in Turkish scholarship, the keywords *gömülü kuram, gömülü teori, temellendirilmiş kuram,* and *temellendirilmiş teori* were searched within titles, abstracts, and keywords. This search yielded 384 dissertations, again showing a marked increase in studies conducted after 2010 and reflecting a parallel disciplinary distribution to the international data. These results show a growing interest in grounded theory in both international and Turkish contexts since 2010. The parallel rise in international and national adoption underscores the method's emerging role and potential for further study in the discipline.

The search with the terms "architecture" and "grounded theory" identified 21 theses, a relatively low number compared to other social sciences. Of these, twelve were doctoral dissertations and nine were master's theses, all completed between 2015 and 2024. The majority (16 out of 21) were situated within architectural design, with only two in urban design and three in informatics in architectural design. To ensure a focused and comparable dataset, the present study includes only doctoral dissertations in architectural design as listed in Table 2.

Between 2015 and 2024, eleven dissertations in Turkiye explicitly employed grounded theory in architectural research, marking a methodological shift in Turkish architectural academia. Their chronological distribution reveals a steady increase, culminating in a distinct surge after 2022, which aligns with the global trend. Institutionally, Istanbul Technical University (3) and Yıldız Technical University (2) emerged as the initial centers of grounded theory adoption, followed by Dokuz Eylül University (2) and four other universities. Despite the diversity of supervisory backgrounds, these dissertations originated from only seven universi-

Table 2. The list of dissertations.

	Name	Year	Writer	Advisor	School
D1	A Transdiscursive Enquiry on Urban Identity	2015	Avşar Karababa	Prof. Dr. Semra Aydınlı, Doç. Dr. Lena Hopsch	Istanbul Technical University
D2	Questioning Architectural Envelope - Context Relationship in Contemporary Architecture	2016	Hande Düzgün Bekdaş	Prof. Dr. Çiğdem Polatoğlu	Yıldız Technical University
D3	Grey Matter: Perception of Semi-Open/ Open Semi-Public/Semi-Private Spaces in The Housing Areas by Young Adults	2016	Sedef Özçelik Güney	Prof. Dr. Yurdanur Dülgeroğlu	Istanbul Technical University
D4	"Active Studio" Experiences in Architectural Design Education	2017	Bengi Yurtsever	Prof. Dr. Çiğdem Polatoğlu	Yıldız Technical University
D5	Employing Grids: A Discursive Account of Spatial and Performative Skills	2022	Hatice Cansu Cürgen Gürpınar	Prof. Dr. Hüseyin Kahvecioğlu	Istanbul Technical University
D6	Space Plasticity in Architecture	2022	Zeynep Sadıklar	Prof. Dr.Asu Beşgen	Karadeniz Technical University
D7	A Conceptualization for Research-Based Architecture Between Theory and Practice: An Atlas for Architectural Research in Türkiye	2022	Zeynep Dündar	Prof. Dr. Gökçeçiçek Savaşır	Dokuz Eylül University
D8	Analysis of Informal Environments in Architectural Education in Türkiye	2023	Nurten Özdemir Gökmen	Prof. Dr. Hikmet Gökmen	Dokuz Eylül University
D9	Competitions In Architecture-Urban Design Knowledge Seeking	2023	Doğan Ümit Yücel	Prof. Dr. Aysu Akalın	Gazi University
D10	Image After Representation: Cartographic Paradigm in Architecture	2024	Doruk Can Özçifçi	Prof. Dr. Fatma Zeynep Aygen	Mimar Sinan University
D11	Space and Place in Dr. M. Mansour Falamaki's Architectural Thinking Through Hafız's Poetry and Merleau-Ponty's Phenomenology	2024	Farnaz Kimya	Prof. Dr. F. Cânâ Bilsel	Middle East Technical University

ties. The topics addressed in these dissertations range from urban identity to representation and phenomenology, demonstrating the method's adaptability across different scales and epistemological positions.

This study employs content analysis to explore the methodological and philosophical dimensions of grounded theory in architectural research. Through systematic coding and categorization, content analysis identifies patterns, frequencies, word relationships, and communication structures (Pope et al., 2006; Gbrich, 2007). Once coded, the raw data is processed, summarized, and interpreted within predefined categories. The process unfolds in four main stages: identifying categories, processing data, describing findings, and interpreting results. Ultimately, content analysis not only reveals prevailing trends within a given field but also informs future research (Miles & Huberman, 1994).

Rather than merely reviewing methodological descriptions, the analysis aims to understand how grounded theory has been interpreted, adapted, and operationalized within the architectural discipline. The analytical categories defined for context analysis are systematically matched with the content of each dissertation, allowing for the identification of recurring patterns, methodological tendencies, and philosophical orientations that define the themes in the next section.

PHILOSOPHICAL AND METHODOLOGICAL DIMENSIONS OF GROUNDED THEORY IN ARCHITECTURAL RESEARCH

Findings of Content Analysis

The dissertations were examined through eight analytical categories: method, concerning the overall research approach employed; aim, referring to the specific research goal, whether conceptual, theoretical, or empirical; data set, addressing the type and origin of collected data and specifying whether the sources are human or non-human; data collection, describing the tools and procedures used to gather data; data coding, which includes techniques for turning raw data into conceptual categories; data display, referring to the ways findings are visually or textually presented; reference to grounded theory literature, indicating the degree to which the methodology is supported by estab-

lished scholarship; and description of the coding process, showing the transparency and detail provided regarding data analysis steps (Table 3).

The first category addresses the philosophical foundations of grounded theory. Accordingly, D4, D7, and D8 apply constructivist grounded theory, while D1, D2, and D3 adopt a mixed method that integrates grounded theory with at least one additional method, such as discourse analysis or case study. The remaining dissertations do not specify a particular philosophical stance, reflecting a general tendency to employ grounded theory in a traditional manner.

The aim of the study examines how each dissertation defines its central conceptual orientation. In general, the dissertations commonly aim to construct a conceptual or theoretical framework by identifying a specific phenomenon, situation, concept, or individual as the core research problem. The primary motivation for employing grounded theory is its capacity to uncover hidden or tacit knowledge embedded within these contexts. For instance, D1, D2, D3, D5, D6, D7, D9, and D10 aim to generate new conceptual insights and reveal the underlying relationships in particular architectural phenomena. In contrast, D4, D9, and D11 focus on exposing implicit dimensions of knowledge within specific situations or individual experiences.

Data source examines the types and range of data used. The dissertations exhibit a diverse range of data forms and materials. D2, D3, and D4 primarily focus on human actors (such as interviewees, participants, or users), while D1, D5, D6, D9, D10, and D11 focus on non-human actors (including artifacts, documents, or environments). Meanwhile, D7 and D8 analyze both human and non-human actors, taking a hybrid approach. Within the non-human category, data sources include a notable range of written materials including journals, online art and design platforms, books, manuals, lecture notes, archives, theses, blogs, jury reports, competition briefs, regulations and visual materials such as architectural drawings, maps, photographs, images, and other representational materials.

Data collection method focuses on how data are gathered to construct and refine theoretical insights. The literature on grounded theory emphasizes the importance of in-depth interviews as a primary method for collecting data. A semi-structured interview format is implemented in D1, D3, D4, D7, D8, and D11. The studies also incorporate complementary techniques such as observation, case studies, and surveys, enabling a more comprehensive understanding of the context. Furthermore, each dissertation includes a systematic review of the existing literature related to its research topic, both to frame the study context and to inform the coding and theoretical processes.

Data coding examines how data are analyzed and transformed into conceptual categories through systematic coding procedure, distinguishing grounded theory from other qualitative approaches. Although D1, D2, D3, and D10 reference the stages of grounded theory coding in the literature, they do not provide practical illustrations of these procedures. Variations in terminology are inherent to the method; for instance, seven dissertations explicitly reference the three-step coding process. Those using terms such as open, axial, and selective coding adhere to the classical grounded theory model, while those referring to initial, focused, and theoretical coding align more closely with a constructivist approach. Additionally, another notable observation concerns the use of manual versus digital coding techniques. While D9 and D11 employ digital tools such as MAXQDA and ATLAS.ti, the remaining dissertations rely on manual coding, utilizing printed transcripts, notes, or spreadsheet-based matrices.

D5, D6, D7, D8, D9 and D11 transparently present their coding processes, either within the main text or in the appendices, often using tabular representations that make the analytical procedure traceable and replicable for other researchers. However, the others do not fully disclose their coding procedures, providing only general descriptions without concrete examples or visualizations.

Data display focuses on how the analyzed data are visually represented and conceptually organized. In all studies, tables are used to illustrate how raw data is transformed into initial or focused codes. Network diagrams, concept maps, and atlas visualizations, typically developed during the theoretical coding stage, serve as creative tools that depict the relationships among codes, categories, and emerging concepts. D6, D7, D8, D10, and D11 provide particularly strong examples of diverse and innovative data display strategies, demonstrating how visual thinking enhances methodological transparency and theoretical synthesis.

The analysis reveals that each dissertation employs a distinct approach, highlighting the diverse ways in which grounded theory is applied within architecture. D1, recognized as the earliest example of grounded theory in this field, treats the method not conventionally but rather as a complementary tool. D2 employs a coding process that is not strictly tied to grounded theory; instead, it proposes an experimental conceptualization through a mixed-methodology approach, integrating discourse analysis and grounded theory. D3 stands out for its wide range of data collection tools, cyclical and iterative research design, and extensive use of quantitative data. In D4, assumptions are formulated before each cycle and updated based on emerging data, and the introduction includes a glossary of key terms related to the method. D5 diverges from the standard approach by applying a unique interpretation during the coding process.

D6 utilizes tables to illustrate the coding procedure transparently, suggesting a foundational model that is adaptable to various other studies. D7 constructs its own body of knowledge via grounded theory, culminating in a layered,

Table 3. Content analysis of the dissertations.

	Method	Aim	Data Source	Data Collection	Data Coding	Data Display	Literature Review	Coding Process
D1	Mixed method / grounded theory as a tool	Conceptual study	Non-human actors (Urban areas: Asmalımescit, Levent-Kağıthane, Kuzguncuk)	Literature review, observation, in-depth interviews	No Reference to grounded theory's coding stages	Narratives and diagrams	-	-
D2	Mixed method / grounded theory + discourse analysis	Conceptual study	Human actors (discourses of architects engaged in media and literature)	Content analysis on manifestos, books and articles	Thematic coding / no reference to grounded theory's coding stages	Tables, concept maps and conceptual network diagrams	-	-
D3	Mixed method / grounded theory + quantitative strategies	Conceptual study	Human actors (people living in Maslak/Beşiktaş/ Beyoğlu/Şişli on the metro line)	Observation, survey, in-depth interview, case study	A layered and relational coding process / no reference to grounded theory's coding stages	Tables	-	-
D4	Constructivist grounded theory	Conceptual study	Human actors (participants of architectural design studio)	Survey, in-depth interview	Initial coding, focused coding, theoretical coding	Tables	+	-
D5	Grounded theory	Conceptual study	Non-human actors (journals, online art and design platforms, books, design and construction manuals, lecture notes, and archives of museums and institutions)	Content analysis on data set	Open coding, focused coding, and theoretical coding	Tables	+	+
D6	Grounded theory	Theoretical framework	Non-human actors (Dictionaries, encyclopedias, programs, manifestos)	Literature review, survey	Open coding, axial coding, and selective coding	Concept maps and conceptual network diagrams	+	+
D7	Constructivist grounded theory	Conceptual study	Human + nonhuman actors (architectural firms, associations, NGOs, public institutions, municipalities, and academia, design research literature)	Literature review, in-depth interview	Initial coding, focused coding, theoretical coding	Diagrams and atlas	+	+
D8	Constructivist grounded theory	Conceptual study	Human + nonhuman actors (literature on informal learning methods in architecture, articles, theses, blogs and architects)	Literature review, in-depth interview	Initial coding, focused coding, theoretical coding	Diagrams and tables	+	+
D9	Grounded theory	Conceptual study	Non-human actors (Akhisar Municipality architectural and urban design idea competition question-and-answer sessions, jury reports, and participants' proposals)	Content analysis on data set, literature review	MAXQDA, initial coding,axial coding, and focused coding	Tables, word cloud	+	+
D10	Grounded theory	Conceptual study	Non-human actors (images: drawins, maps, manuscripts,pictures)	Content analysis on data set	No reference to grounded theory's coding stages	Diagrams	+	-
D11	Grounded theory	Conceptual study	Human actors (books and documents)	Content analysis on data set, in-depth interview	Atlas.ti, Open Coding, axial coding, selective coding	Tables and diagrams	+	+

open-ended, and interpretable result presented in an atlas-style format. D8 provides detailed tables of its initial, focused, and theoretical coding stages in both the main text and the appendix, offering readers a clear view of the methodology. D9 aligns grounded theory with a phenomenological and hermeneutic approach, utilizing MAXQDA software to analyze a specific case and uncover its tacit knowledge, rather than relying on a large dataset. Finally, D10 relies on images as its primary data source, while D11 focuses on a single individual's discourse and outputs, setting both apart from the other studies.

Discussions for Adopting Grounded Theory in Architectural Research

The content analysis reveals that the use of grounded theory in architectural research is shaped by three overarching themes: methodological adaptation and philosophical pluralism, knowledge construction through multi-layered data practices, and analytical transparency. Building on these insights, the following discussion examines the implications of these themes for the future adoption of grounded theory in architecture, highlighting both the opportunities it offers, and the methodological refinements required to strengthen its application.

Figure 1 illustrates the overall process of applying grounded theory in architectural research. The diagram not only visualizes the core components of grounded theory but also aligns them with architecture-specific research strategies identified through the content analysis. In doing so, it maps each stage of the grounded theory process onto the three key themes revealed in the section showing how the method's foundational concepts intersect with architecturally grounded research practices.

Methodological adaptation and philosophical pluralism: Grounded theory encompasses various philosophical perspectives, each shaped by distinct epistemological assumptions and analytical strategies. This diversity enriches the field but can confuse novice researchers, who may struggle to distinguish between different interpretations and applications. The findings underscore the importance of establishing clear methodological guidelines and consistent terminology to ensure research rigor and transparency. Researchers must understand the philosophies, tactics, and strategies of each grounded theory approach and reference them explicitly in their studies.

The analysis shows that several dissertations integrate grounded theory with complementary methods such as discourse analysis, case study, or content analysis, aiming

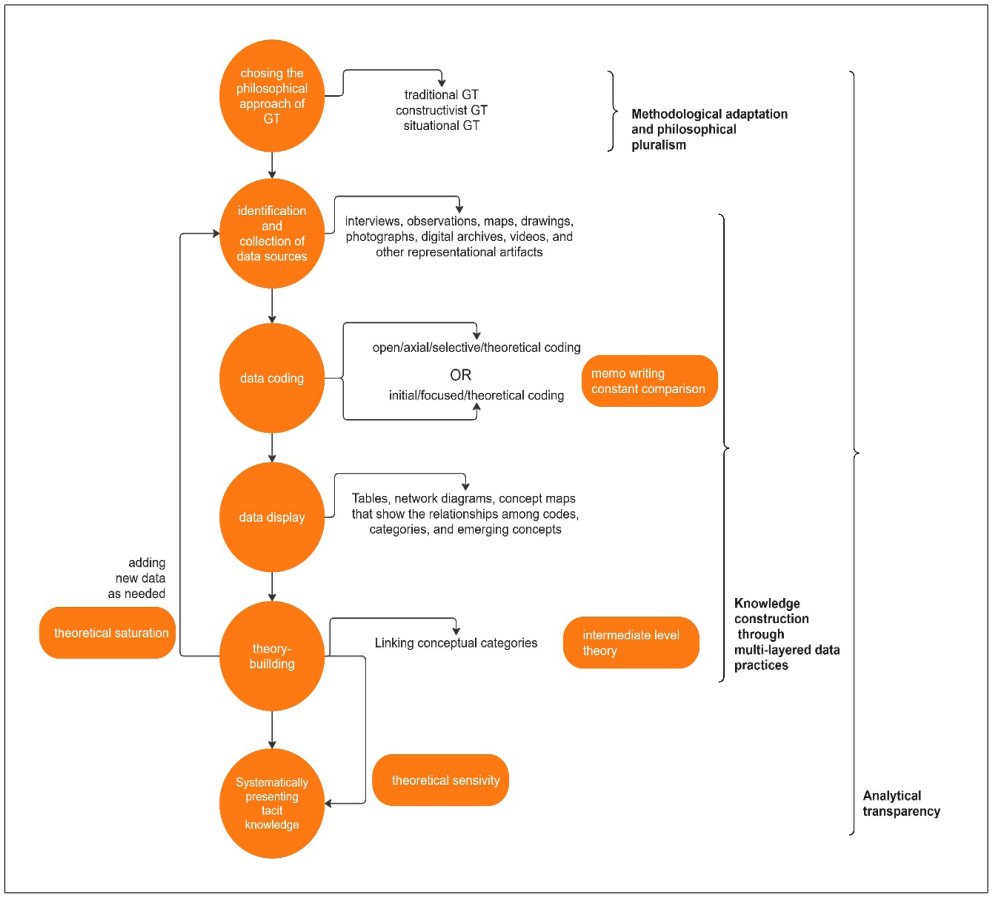

Figure 1. The process of grounded theory in architecture.

to build multi-layered research frameworks. These hybrid designs demonstrate the method's flexibility and its capacity to generate multidimensional insights. However, such integrations require a clearly articulated research rationale, supported by comprehensive literature discussions and visual diagrams that explain how methods are combined to ensure methodological coherence.

Content analysis reveals that many dissertations fail to adequately treat grounded theory as a primary research methodology. Instead, it is frequently positioned as a secondary or supportive analytical tool, applied superficially rather than systematically. This tendency suggests that grounded theory's full potential in architectural research, particularly its capacity for theory building and epistemological innovation remains underutilized. Researchers should explicitly justify why grounded theory is chosen over alternative research methods, specify which grounded theory approach they follow, and define key methodological terms. Articulating how these decisions align with the study's aims not only clarifies the internal logic of the research but also contributes to cultivating a more robust and reflective methodological culture within architectural research.

Suddaby (2006) emphasizes that a robust grounded theory study requires substantial experience, deep subject-matter knowledge, and strong analytical skills. To overcome these methodological and philosophical challenges, researchers must work with supervisors who are knowledgeable in qualitative methodologies. They can also enroll in specialized courses and cultivate critical reading practices to understand the philosophical and procedural nuances of different grounded theory approaches. In addition, participating in research groups, peer-discussion networks, and academic workshops or conferences helps researchers refine their methodological awareness (McCallin, 2003). This allows them to navigate the complexities of applying grounded theory in interdisciplinary contexts.

Knowledge construction through multi-layered data practices: While grounded theory traditionally relies on human participants as primary data sources, architectural research expands the notion of data far beyond human. These sources include observations, maps, drawings, photographs, digital archives, videos, and other representational artifacts (Lianto, 2018). This diversity reflects the multimodal nature of architectural inquiry, distinguishing the field from many social science applications of grounded theory. Such non-human data sources provide access to tacit, embodied, and spatial forms of knowledge that are central to architectural design.

Parallel to diversity of data sources, the dissertations demonstrate wide-ranging data collection strategies. Diversity data collection tools can significantly enhance findings (Birks & Mills, 2015). In addition to semi-structured interviews researchers employ observations, design studio documentation, photographic surveys, and written materials or reflective notes. This diversity not only broadens the empirical base of each study but also enhances the interpretive depth of grounded theory analysis.

A recurring misconception is that grounded theory discourages engagement with previous works (Suddaby, 2006). In contrast, the dissertations show that literature can and often should be treated as a data set, coded in parallel with empirical materials. When used systematically, literature coding strengthens methodological coherence by grounding new insights into established knowledge while still allowing new conceptual patterns to emerge inductively.

The coding process is the most fundamental stage that distinguishes grounded theory from other methods. Although architectural research benefits from a wide range of data sources, collection techniques, and representational formats which offer considerable creative potential, this diversity can also lead to noticeable inconsistencies and methodological fragmentation during coding. Yet the multi-stage coding structure that lies at the core of grounded theory such as open/axial/selective coding or initial/focused/theoretical coding, constitutes a critical component that shapes the method's epistemological stance, analytical depth, and overall theoretical coherence. Thus, the coding stages represent the most clearly defined and least open-to-interpretation component of the method. The analysis shows that many dissertations describe coding only in general terms, without providing concrete examples, tables, or visualizations. Such omissions obscure what the most characteristic and creative phase of grounded theory is arguably, weakening the robustness of the resulting theoretical frameworks.

Depending on the volume and complexity of the data, coding in grounded theory studies may be conducted manually or with the assistance of software. Manual coding enables a closer and more interpretive engagement with the data, enhancing sensitivity to contextual and semantic nuances. However, managing large data sets can pose significant challenges, making qualitative data analysis software advantageous for organizing and systematizing the coding process. In the dissertations examined, critical reflections on how the chosen method affects the reliability, depth, or the researcher's role in the analysis are largely absent. Yet excessive reliance on such tools may weaken the researcher's interpretive closeness to the data and limit the degree of interaction required by grounded theory. For this reason, it is crucial that researchers actively direct and oversee the coding process rather than delegating it entirely to the software.

Unlike other research methods, grounded theory does not focus on testing an existing theory or simply counting words (Suddaby, 2006). As Morse (2016) emphasizes, grounded theory is not governed by rigid procedural formulas; instead, it prioritizes an iterative, process-oriented engagement with data. Importantly, grounded theory re-

quires researchers to recognize and articulate the emergent relationships within their data not merely as descriptive outcomes but as the foundations of new conceptual understanding This relational understanding of data is particularly relevant for architectural research, where complexity, ambiguity, and layered meanings are inherent to the subject matter.

The analysis of dissertations reveals, however, that grounded theory's strongest contribution, its capacity for theory building remains underutilized within architectural research. Many dissertations struggle to translate their rich data into fully developed theoretical frameworks. This difficulty is partly tied to insufficient engagement with the core analytical mechanisms of grounded theory, such as theoretical sampling, constant comparison, and theoretical saturation. These procedures require ongoing iteration, critical reflexivity, and conceptual precision; yet in several dissertations, they are mentioned only briefly or applied superficially, limiting the depth and robustness of the resulting theory. Detailed explanations of how theoretical sampling is conducted, how comparative strategies inform concept refinement, and how saturation criteria are established would significantly enhance methodological clarity.

One of the central challenges for novice grounded theory researchers is the dual responsibility of being both the data collector and the data analyst (McCallin, 2003). This dual role requires a delicate balance between objectivity and reflexivity. Researchers must simultaneously engage with the field through interviews, observations, and other techniques while continuously analyzing the data in real time. This iterative interaction demands sustained analytical awareness, as insights emerging during data collection often reshape subsequent analytical directions.

Grounded theory explicitly encourages the incorporation of personal data such as field notes, reflective memos, and spontaneous observations. These materials enrich the analytical process by capturing subtle interactions, contextual nuances, and experiential impressions that may not be fully visible in formal data sources. However, this also means that the researcher's interpretive lens shaped by their assumptions, experiences, and theoretical sensitivities, inevitably influences the development of emerging concepts. In this sense, grounded theory positions the researcher not as a neutral observer but as an active participant in the knowledge-production process. Strengthening reflexivity is therefore a critical requirement for grounded theory in architecture where subjective interpretations and experiential judgments are integral to both the research process and the phenomena.

Analytical transparency: Analytical transparency is a fundamental requirement for ensuring the reliability of grounded theory studies. One of the major obstacles to transparency is conceptual inconsistency and terminological ambiguity. Researchers must clearly articulate their methodological stance and the terminology they employ. Yet, in the dissertations examined, terminology is often mixed across different grounded theory traditions. This pattern supports the broader finding that, despite its long history, many researchers possess only a partial understanding of the philosophical and procedural foundations of grounded theory (Fernandez, 2004). Although consulting foundational sources can enhance conceptual clarity, individual interpretation may still introduce ambiguity an issue also observed in several dissertations analyzed.

At this point, including a glossary of key grounded theory terms within dissertations can significantly improve terminological clarity. As exemplified in D4, providing a brief glossary of core concepts strengthens the researcher's methodological positioning and enables readers to follow the chosen approach more accurately and consistently. This practice is particularly beneficial in studies where terms from different grounded theory traditions are used concurrently, offering an effective way to maintain conceptual coherence.

Moreover, the term grounded theory and its associated concepts appear in Turkish academic literature through several parallel translations, *gömülü kuram, gömülü teori, temellendirilmiş kuram, and temellendirilmiş teori*. Because these variants are used inconsistently across publications, researchers conducting literature search in Turkish risk overlooking relevant studies if they rely on only a single version of the term. To prevent such omissions and to increase accessibility, it is essential for researchers to be aware of these different translations. Furthermore, including multiple Turkish equivalents as keywords or referencing them explicitly within the text can significantly improve searchability and visibility, ensuring that future studies are more easily discoverable within the national research landscape.

Consistency is also an essential component of analytical transparency. In grounded theory studies, researchers should clearly describe the types of data they use, the procedures through which codes and categories are generated at each stage, and the evidence demonstrating that these codes genuinely emerge from the data rather than from preconceived assumptions. However, in practice, presenting the full coding process particularly the first two stages of coding can be challenging in articles or dissertations, especially when the dataset is extensive. In such cases, it is advisable to include selected examples of the coding procedure within the main text to illustrate the analytical logic, while providing the complete coding scheme in the appendices or through supplementary online materials such as cloud-based repositories. Of course, the extent to which these materials can be shared depends on issues of confidentiality and the researcher's ability to make their data publicly accessible. Ensuring this balance between transparency and

ethical responsibility is crucial for strengthening methodological rigor in grounded theory research.

Equally important is the explicit sharing of the researcher's experiences, challenges, and decision-making processes encountered during the application of the method. Providing reflexive accounts of methodological difficulties such as managing simultaneous data collection and analysis, navigating ambiguous categories, or determining saturation enhances the credibility of the study and offers valuable guidance for future researchers.

CONCLUSION

This study comprehensively examines how Turkish architectural researchers adopt and interpret grounded theory, systematically analyzing doctoral dissertations. Grounded theory in the Turkish architectural research context is not yet an established method, but rather an emerging and evolving practice. The terminological inconsistencies, limited transparency in coding procedures, and ambiguity regarding the link between method and philosophical stance reflect the fact that the method is still relatively new within this disciplinary and national setting.

By contrast, in countries where grounded theory has a longer and more institutionalized history such as the United States, the United Kingdom, and Australia more systematic methodological training, well-developed qualitative research communities, and stronger traditions of theory building have enabled researchers to achieve higher levels of methodological consistency and analytical transparency. However, this disparity should not be viewed solely as a deficit. It also represents a productive space for growth, experimentation, and innovation within the Turkish context. The relatively recent adoption of grounded theory in Turkish architectural research allows for diverse epistemological interpretations and opens room for creative, interdisciplinary applications.

Integrating grounded theory into doctoral programs creates an environment that strengthens methodological competence while fostering scholarly dialogue. This holistic approach equips researchers with the critical, reflexive, and theoretically informed perspectives necessary to engage with grounded theory in a rigorous and meaningful way. Moreover, researchers' honest accounts of the challenges they encounter, the adjustments they make, and the experiences they gain throughout the process enhance collective learning, thereby improving methodological transparency and reproducibility within the field of architecture. In this way, supportive academic environments that prioritize experience-sharing and continuous methodological refinement become essential for conducting robust grounded theory research.

Ultimately, the purpose of methodological inquiry in architecture should not be to reproduce a fixed model or to pursue methodological perfection as an end. The goal is not to turn grounded theory or any method into an object of methodological fetishism, but rather to use it as a means of critical reflection and conceptual discovery. What matters is cultivating an awareness of why and how a method is employed, and what kinds of knowledge it allows us to produce or obscure. In this sense, grounded theory should be understood not as a prescriptive framework but as a dynamic interpretive lens that invites architectural researchers to question their assumptions, refine their analytical strategies, and contribute to a more pluralistic and reflexive research culture within the discipline.

The review reveals a positive, cumulative progression, as each study builds upon the insights of its predecessors. This trajectory suggests a promising potential for qualitative advancement in Turkish architectural research. Consequently, it becomes an academic responsibility to develop a thorough understanding of grounded theory and to conduct flexible, creative studies that remain aligned with its underlying philosophy. To foster this growth, it is essential to broaden the scope of discussion, strengthen collaborative communication platforms among researchers, adopt a patient yet critical stance, and refine feedback mechanisms. In this regard, the present study aims to contribute meaningfully to the field and catalyze further research and methodological innovation in architectural scholarships.

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REFERENCES

Birks, M. & Mills, J. (2015). *Grounded theory: A practical guide*. Sage.

Çelik, H. & Ekşi, H. (2015). *Nitel desenler: Gömülü teori*. EDAM.

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

Charmaz, K. (2016). Shifting the grounds: constructivist grounded theory methods. J. M. Morse, P. N. Stern, J. Corbin, B. Bowers, K. Charmaz & AE. Clarke (Eds.). *Developing grounded theory: the second generation* (pp. 127–155). Routledge.

Clarke, A.E. (2003). Situational analyses: grounded theory mapping after the postmodern turn. *Symbolic In-*

teraction, 26(4), 553–576. https://doi.org/10.1525/si.2003.26.4.553

Clarke, A.E. (2015). From grounded theory to situational analysis: What's new? Why? How? A. E. Clarke, R. Washburn & C. Friese (Eds.). *Situational analysis in practice: mapping research with grounded theory* (pp. 84–118). Left Coast Press.

Cürgen, G. C. (2022). *Employing grids: a discursive account of spatial and performative skills [Unpublished doctoral dissertation]*. İstanbul Technical University.

Dündar, Z. (2022). *A conceptualization for research-based architecture between theory and practice: An atlas for architectural research in Turkey [Unpublished doctoral dissertation]*. Dokuz Eylül University.

Düzgün, H. (2016). *Questioning architectural envelope - context relationship in contemporary architecture [Unpublished doctoral dissertation]*. Yıldız Technical University. https://doi.org/10.5505/megaron.2016.53315

Fernandez, W. (2004). The grounded theory method and case study data in is research: issues and design. *Information Systems Foundations Workshop: Constructing and Criticising, 1*(22), 43–59.

Friedman, K. (2003). Theory construction in design research: Criteria, approaches, and methods. *Design Studies, 24*(6), 507–522. https://doi.org/10.1016/S0142-694X(03)00039-5

Gbrich, C. (2007). *Qualitative data analysis: An introduction*. Sage.

Glaser, B. G. & Strauss, A. (1967*). The discovery of grounded theory: Strategies for qualitative research*. Aldine Publishing Company. https://doi.org/10.1097/00006199-196807000-00014

Groat, L. N. & Wang, D. (2013). *Architectural research methods*. John Wiley & Sons.

Karababa, A. (2015). *A transdiscursive enquiry on urban identity [Unpublished doctoral dissertation]*. İstanbul Technical University.

Kimya, F. (2024). *Space and place in Dr. M. Mansour Falamaki's architectural thinking through Hafız's poetry and Merleau-Ponty's phenomenology [Unpublished doctoral dissertation]*. Middle East Technical University.

Lianto, F. (2018, November 27–28). *Grounded theory methodology in architectural research.* ICCOMSET 2018, Tasikmalaya, Indonesia.

Mccallin, A. M. (2003). Designing a grounded theory study: some practicalities. *Nursing in Critical Care, 8*(5), 203–208. https://doi.org/10.1046/j.1362-1017.2003.00033.x

Miles, M. B. & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. Sage.

Morse, J. M. (2016). Tussles, tensions, and resolutions. J. M. Morse, P. N. Stern, J. Corbin, B. Bowers, K. Charmaz and A. E. Clarke (Eds.). *Developing grounded theory: the second generation*. Routledge. https://doi.org/10.4324/9781315430577

Özçelik, G. S. (2016). *Grey matter: perception of semi-open/open semi-public/semi-private spaces in the housing areas by young adults [Unpublished doctoral dissertation]*. İstanbul Technical University.

Özçifçi, D. C. (2024). *Image after representation: cartographic paradigm in architecture [Unpublished doctoral dissertation]*. Mimar Sinan University.

Özdemir, G. N. (2023). *Analysis of informal environments in architectural education in Türkiye [Unpublished doctoral dissertation]*. Dokuz Eylül University.

Pope, C., Ziebland, S. & Mays. N. (2006). Analysing qualitative data. C. Pope & N. Mays (Eds.). *Qualitative research in health care (*3rd ed, pp. 63–81). Blackwell Publishing. https://doi.org/10.1002/9780470750841.ch7

Sadıklar, Z. (2022). *Space plasticity in architecture [Unpublished doctoral dissertation]*. Karadeniz Technical University.

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

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

Timonen, V., Foley, G. & Conlon, C. (2018). Challenges when using grounded theory: A pragmatic introduction to doing gt research. *International Journal of Qualitative Methods, 17*(1), 1–10. https://doi.org/10.1177/1609406918758086

Yücel, D. Ü. (2023). *Competitions in architecture-urban design knowledge seeking [Unpublished doctoral dissertation]*. Gazi University.

Yurtsever, B. (2017). *"Active Studio" experiences in architectural design education [Unpublished doctoral dissertation]*. Yıldız Technical University.