idealkent
Kent Araştırmaları Dergisi • Journal of Urban Studies

Type: Research Article
Received Date: September 9, 2026
Accepted Date: October 29, 2026
Published: November 18, 2026
10.31198/idealkent.2036655

From cinematic experience to spatial thinking: Collective imagination as a pre-design method in architectural education

Sinematik deneyimden mekânsal düşünmeye: Mimarlık eğitiminde bir ön tasarım yöntemi olarak kolektif imgelem

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Abstarct

This study investigates how cinema stimulates collective spatial imagination in architectural education and how cine-spatial thinking is externalized through collective imagination as a pre-design method. Sixteen collaboratively produced, student-generated boards—responding to five cinematic narratives—were examined using qualitative content analysis across three dimensions: conceptual imagination, spatial imagination, and visual externalization. The analysis revealed recurring associations between socially grounded concepts and spatial conditions, such as fragmentation, boundaries, movement, and hierarchy, expressed through a multimodal representational repertoire. Consistent spatial patterns across different films, combined with narrative-specific variations, demonstrate that these boards capture both shared and context-sensitive spatial interpretations. These findings underscore how cinematic narratives can serve as a foundation for collectively interpreting socio-spatial relations prior to formal design development. Ultimately, this research conceptualizes collective imagination as a mediating framework between cinematic experience and spatial thinking, providing an intermediate representational environment where emerging spatial concepts become visible and accessible for shared evaluation during the pre-design phase.

Keywords: *Architectural education, collective imagination, cinema and space, spatial thinking, pre-design methods*

Öz

Bu çalışma, mimarlık eğitiminde sinemanın kolektif mekânsal imgelemi nasıl harekete geçirdiğini ve sinematik-mekânsal düşünmenin bir ön tasarım yöntemi olarak kolektif imgelem aracılığıyla nasıl dışsallaştırıldığını araştırmaktadır. Seçilen beş sinemasal anlatıya yanıt olarak iş birliği içinde üretilen on altı öğrenci paftası; kavramsal imgelem, mekânsal imgelem ve görsel dışsallaştırma olmak üzere üç boyutta nitel içerik analizi yoluyla incelenmiştir. Paftalar arası ve ilişkisel analizler, toplumsal temelli kavramlar ile parçalanma, sınırlar, hareket ve hiyerarşi gibi mekânsal durumlar arasında tekrar eden ilişkilerin yanı sıra, tutarlı biçimde çok modlu bir temsil repertuvarının varlığını ortaya koymuştur. Filmler arasında tekrarlanan mekânsal örüntülerin anlatıya özgü farklılaşmalarla birlikte görülmesi, tamamlanmış panolarda ortak mekânsal yorumlama eğilimlerinin ve belirli filmlere duyarlı mekânsal yaklaşımların varlığına işaret etmektedir. Bu bulgular, sinemasal anlatıların biçimsel tasarım geliştirme aşamasından önce toplumsal ve mekânsal ilişkilerin kolektif olarak yorumlanmasına bir zemin sağlayabileceğini ortaya koymaktadır. Çalışma, kolektif imgelemi sinematik deneyim ile mekansal düşünme arasında aracılık etme potansiyeli taşıyan bir çerçeve olarak kavramsallaştırmaktadır. Bu çerçeve, tasarım öncesi aşamada gelişmekte olan mekânsal yorumların görünürlük kazandığı ve ortak değerlendirmeye açık hale geldiği bir ara temsil ortamı sunmaktadır.

Anahtar Kelimeler: *Mimarlık eğitimi, kolektif imgelem, sinema ve mekân, mekânsal düşünme, ön tasarım yöntemleri*

Citation:
Sarı, T. (2026). From cinematic experience to spatial thinking: Collective imagination as a pre-design method in architectural education. *İDEALKENT, 51*, e2036655.
https://doi.org/10.31198/idealkent.2036655

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Review Note:
Evaluated by Double-Blind Peer Review

Ethics Reporting:
To report potential ethical concerns, contact: bilgi@idealkentdergisi.com

Similarity screening was conducted via intihal.net.

Introduction

Architectural design education increasingly recognizes imagination as integral to exploratory and pre-design learning, particularly when spatial ideas lack formal definition. Imagination allows students to explore spatial and temporal possibilities beyond direct experience, while narrative practices effectively activate this thinking (Havik & Sioli, 2021). Within this context, cinema serves as a distinct pedagogical medium by connecting spatial experience with narrative, temporality, movement, social interaction, atmosphere, and embodied perception. Research shows film provides visual and narrative stimuli that help students interpret and transform filmic space through alternative representations (Bergera, 2018; Park & Kim, 2021). Thus, cinematic narratives offer experiential material for encountering space beyond its purely physical attributes.

This potential amplifies when cinematic experience is engaged through collective imagination. Drawing on recent accounts (Glăveanu et al., 2025), this study defines collective imagination as a shared, dialogical process where diverse perspectives are articulated through common artifacts. This concept unites three theoretical focuses: cinematic experience as a spatial stimulus, collective meaning-making as a learning mode, and visual externalization to make emerging spatial thought observable. Consequently, the collective imagination board acts as an intermediary between cinematic experience and formal architectural propositions. It offers a representational field to collaboratively explore narrative meanings, social relations, spatial conditions, and visual associations before solidifying them into design decisions.

This study examines cinema as a pedagogical catalyst for collective spatial imagination, focusing on how narratives translate into visual and spatial thinking. The investigation addresses four interrelated dimensions: (1) how cinema stimulates collective spatial imagination; (2) how students externalize cine-spatial thinking visually; (3) a comparative analysis identifying recurring conceptual and spatial themes across different cinematic experiences; and (4) a pedagogical assessment of this pre-design learning strategy's potentials and limitations. Together, these dimensions form an analytical framework connecting cinematic pedagogy with visual externalization and design learning.

Methodologically, this study employs a qualitative, artifact-based design, using student-generated collective imagination boards as primary empirical data. These boards undergo qualitative content analysis via an iterative coding procedure (Mayring, 2000, 2019; Saldaña, 2021). Operating across three dimensions—conceptual imagination, spatial imagination, and visual externalization—the analysis traces how narratives are collectively interpreted, organized, and visualized. By progressing from individual board assessments to cross-board relational comparisons, this approach identifies both recurrent and narrative-sensitive patterns of cine-spatial imagination.

From Cinematic Experience to Collective Spatial Imagination

Contemporary architectural education increasingly frames design learning as an exploratory, iterative process where imagination drives emerging ideas. McLain (2022) and Merter (2024) conceptualize this learning as experiential and participatory, grounded in collaborative problem-solving rather than purely formal development. Specifically, within architecture, Havik and Sioli (2021) identify imagination as a crucial yet under-addressed dimension, showing how narrative practices help students envision spatial conditions beyond direct experience. Cinema serves as a distinct medium here. Erdoğan and Akarsu (2023) view it as an experimental ground that expands spatial awareness and introduces alternative spatial possibilities. Similarly, Bergera (2018) shows how film provides vital visual and narrative stimuli for interpreting contexts and spatial relationships early in the design process. Together, these studies establish a strong link between cinematic experience, spatial imagination, and exploratory architectural thinking.

Recent studies further examine how moving-image practices facilitate spatial interpretation. For instance, Pandey and Kumar (2025) demonstrate video installation's role in spatial inquiry, while Park and Kim (2021) highlight filmic space as a catalyst for conceptual sketching and divergent spatial problem-solving. Although Park and Kim ultimately translate filmic elements into formal architecture, their work proves cinema can operate at an earlier cognitive stage—visually reformulating ideas before they spatialize. Filmmaking is also frequently used as a representational tool. Khalili (2023) pairs cinematic analysis with architectural representation to help students conceptualize embodied viewpoints, while Pinto and Guner (2024) integrate storytelling and filmmaking to concretize abstract ideas through multidimensional learning. However, in these existing pedagogical models, film primarily functions as a tool for analyzing, producing, or communicating architectural narratives, rather than as an open-ended catalyst for pre-design exploration.

Parallel to these cinematic explorations, literature on collaborative design pedagogy emphasizes collective intelligence and shared knowledge production (Anteet & Binabid, 2025; Demirtaş, 2025; Lake et al., 2024; Zha et al., 2023). Crucially, collaborative learning transcends mere simultaneous participation; it is a dialogic, situated process where diverse perspectives negotiate shared meanings (Ma et al., 2025). This dialogical nature bridges collaborative learning and collective imagination. Glăveanu et al. (2025) define collective imagination as an inherently dialogical practice where shared artifacts evolve through reciprocal acts of making and reflecting. García Galiot (2026) adapts this for design education, framing "learning by imagining" as a situated process that materializes possibilities through artifacts without forcing convergence on a predetermined design solution.

Despite these clear pedagogical intersections, the synthesis of design learning, cinematic experience, and collective imagination remains underexplored. Existing research focuses heavily on film analysis or direct architectural translation, while studies on collective imagination rarely examine cinema as an initiating stimulus. Consequently, it remains unclear how pre-existing cinematic narratives stimulate collectively constructed spatial imaginaries, or how these ideas are visually externalized through shared artifacts during pre-design.

Addressing this gap, this study examines collective imagination as a pre-design pedagogical method that integrates cinematic interpretation, collective meaning-making, and visual production. Following individual viewings, students collaboratively interpret cinematic experiences to develop new socio-spatial concepts. Moving around a shared board, they progressively layer drawings, images, and texts, actively expanding on one another's contributions. Unlike approaches that translate film directly into architectural design (Park & Kim, 2021) or rely on film purely for initial interpretation (Bergera, 2018), this method prioritizes the collective construction and visual externalization of spatial ideas before formal design development begins. By analyzing the resulting boards, this study evaluates the pedagogical potential of this intermediate representational field as a catalyst for cine-spatial thinking.

Materials and Methods

This study adopts a qualitative, artifact-based research design to investigate how cinematic narratives stimulate collective spatial imagination and its visual externalization in architectural education. The empirical data consists of 16 collective imagination boards, produced by 48 undergraduate architecture students (organized into 16 self-formed, stable groups of three) during a 2026 elective course workshop titled *Cinema and Space*. Developed in response to five selected films focused on the theme of housing, these student-generated pedagogical artifacts serve as the primary unit of analysis, capturing the materialization of collective cine-spatial thinking.

The five films were purposively selected for their shared focus on housing, displacement, socioeconomic inequality, and spatial exclusion, offering a diverse range of spatial narratives. Ramin Bahrani's *99 Homes* (2014) examines foreclosure

and insecurity through property and power relations, while Nadine Labaki's *Capernaum* (2018) explores urban poverty, migration, and precarious living conditions in Beirut. Chloé Zhao's *Nomadland* (2020) addresses mobility and temporary dwelling, whereas Bong Joon-ho's *Parasite* (2019) tackles class inequality through stark domestic contrasts and spatial hierarchies. Finally, Sean Baker's *The Florida Project* (2017) portrays housing precarity and social marginalization within Orlando's budget motels. Together, these films provide a thematically coherent yet spatially diverse foundation for analyzing the conceptual, spatial, and visual interpretations across the student-generated boards.

Prior to the workshop, students individually watched their group's selected film in its entirety. The assignment prompted them to interpret housing-related spatial narratives and visually articulate the complex relationships between users, events, space, and time. Working collaboratively on a shared 50 × 70 cm white Canson board, students physically moved around the surface, progressively layering textual and visual materials using drawing pens, colored markers, and collage. This dynamic process encouraged them to continuously build upon one another's contributions, synthesizing techniques like mind mapping and storyboarding. All 16 completed boards were included in the analysis. The full sequence of activities is summarized in Table 1.

Table 1. *Sequence of Activities and Implementation Context of the Collective Imagination Workshop*

Stage	Activity	Setting
1. Preparation	Group formation, film selection, full-film viewing and preliminary studies	Outside class
2. Conceptual discussion	Housing-related conceptual and cine-spatial discussion	In class
3. Collective board development	Collaborative preliminary board design with instructor guidance and feedback	Two-hours workshop
4. Board completion	Finalization of group boards	Outside class
5. Presentation and discussion	Group presentations and collective cine-spatial discussion	Subsequent class

The boards were initially generated as a standard course activity, with the researcher acting as the instructor. Subsequently, all participating students provided written informed consent for their work to be analyzed and academically published. Participation in the research was strictly voluntary, bearing no impact on course assessments or grades. To ensure full anonymity, all boards were assigned coded identifiers.

The boards were examined using qualitative content analysis, integrating Mayring's (2000, 2019) category-oriented approach with Saldaña's (2021) iterative qualitative coding. The coding procedure merged conceptually informed and data-driven methods. Initial codes were guided by the study's core themes—spatial imagination, cinematic experience, visual representation, and design learning—while additional codes emerged from recurring visual, textual, and spatial features across the dataset. Through successive coding cycles, semantically related observations were consolidated and overly specific codes merged, yielding a standardized, consistent coding framework (Table 2).

This framework comprises three interconnected analytical dimensions: Conceptual Imagination (C) captures the ideas driving students' collective interpretations of the films; Spatial Imagination (S) identifies how these ideas are articulated through spatial conditions and configurations; and Visual Externalization (V) addresses the representational modes making this cine-spatial thinking materially visible.

Coding was conducted holistically at the board level. Codes were assigned based strictly on explicit textual expressions, visual elements, or recognizable spatial relationships, avoiding assumptions about presumed student intentions or the original film narratives. For example, eviction notices supported C4 (*Precarity/Insecurity*), drawn walls indicating divided fields supported S2 (*Boundary/Threshold*), and relational arrows supported V4 (*Diagrammatic Representation*). Importantly, for codes like S4 (*Fragmentation/Discontinuity*), evidence had to show spatial discontinuity within the represented environment itself; arbitrary separation resulting merely from the graphic layout of collage elements was deemed insufficient. A single board could receive multiple

codes, and individual features could support multiple dimensions simultaneously. Regardless of the number of supporting instances, each code was recorded only once per board.

Table 2. *Standardized Coding Framework and Definitions for the Collective Imagination Boards*

Main Themes	Standardized Codes	Operational Definitions
Conceptual Imagination (C)	· **C1** Housing/Home	Dwelling, shelter, domestic space, and the meanings of home
	· **C2** Belonging/Identity	Place attachment, spatial identity, belonging, and alienation
	· **C3** Inequality/Power	Socioeconomic disparities, unequal access, and power relations
	· **C4** Precarity/Insecurity	Instability, vulnerability, uncertainty, and insecure living conditions
	· **C5** Mobility/Displacement	Migration, relocation, residential movement, and displacement
	· **C6** Conflict/Resistance	Confrontation, opposition, struggle, and resistance
	· **C7** Isolation/Exclusion	Loneliness, social separation, marginalization, and exclusion
	· **C8** Community/Solidarity	Mutual support, cooperation, community ties, and solidarity
Spatial Imagination (S)	· **S1** Enclosure/Interior	Enclosed spaces, interiors, and spatial containment
	· **S2** Boundary/Threshold	Spatial divisions, barriers, edges, and thresholds
	· **S3** Connection/Network	Spatial links, interconnected places, and networks
	· **S4** Fragmentation/Discontinuity	Spatial separation, discontinuity, and fragmented environments
	· **S5** Hierarchy/Spatial Dominance	Spatial hierarchy, stratification, and dominance
	· **S6** Density/Congestion	Spatial concentration, crowding, and congestion
	· **S7** Openness/Accessibility	Open configurations, permeability, and accessibility
	· **S8** Movement/Transition	Circulation, trajectories, and spatial transitions
Visual Externalization (V)	· **V1** Textual Expression	Written words, phrases, labels, and statements
	· **V2** Figurative Representation	Human figures, bodies, and recognizable figurative imagery
	· **V3** Architectural Representation	Buildings, interiors, architectural drawings, and urban imagery
	· **V4** Diagrammatic Representation	Diagrams, arrows, relational lines, and schematic arrangements
	· **V5** Collage/Appropriated Image	Assembled images, photographic fragments, and appropriated visuals
	· **V6** Graphic/Abstract Expression	Abstract shapes, patterns, and non-figurative compositions
	· **V7** Symbol/Metaphor	Symbols, visual metaphors, and associative imagery

To ensure analytical consistency without relying on statistical inter-coder agreement, an iterative refinement process was employed. Following the framework's development, all boards were re-evaluated to confirm that codes were applied uniformly across the dataset at a consistent level of abstraction. Ambiguous coding decisions were cross-checked against the visual and textual evidence on the boards and revised to align with standardized categories.

Following this comprehensive coding, the analysis advanced in two stages: cross-board comparison and relational interpretation. First, standardized codes were compared across boards to assess their frequency and distribution. Frequency was used descriptively to indicate recurrence, not interpretive significance. Comparisons among boards responding to both the same and different films allowed the study to distinguish *cross-film tendencies* from *narrative-sensitive variations*.

Second, a relational analysis investigated co-occurrences among the C, S, and V codes to determine if specific conceptual interpretations consistently aligned with particular spatial articulations or visual modes. Associations appearing across different films were classified as *cross-film patterns*, while those concentrated within specific movies were deemed *film-sensitive*. Rare associations were noted as *limited patterns* rather than general tendencies. Notably, code co-occurrence highlighted relational tendencies within the artifacts and was not treated as evidence of causal or sequential relationships.

Ultimately, this multi-level procedure transitions the analysis from individual manifestations of cine-spatial thinking to dataset-wide patterns, providing a robust methodological basis for evaluating the pedagogical potentials and limitations of collective imagination in pre-design learning.

Findings

The 16 collective imagination boards were produced as part of a studio-based workshop in which students, working collaboratively in groups of three, responded to five selected cinematic narratives. Each group translated its shared interpretation into a single board using an open representational framework that allowed drawing, collage, text, diagrammatic expression, and symbolic imagery to merge into a collective spatial imagination. Following the standardized coding framework, each board was examined across three analytical dimensions—Conceptual Imagination, Spatial Imagination, and Visual Externalization. The

boards are presented below according to their source films, enabling patterns of convergence and divergence to be traced within individual narratives and, subsequently, across the entire dataset.

99 Homes: 99H-B1 interprets the narrative primarily through housing precarity and socioeconomic inequality. The concept of housing is framed by its socioeconomic dimensions, where foreclosure, unemployment, and landlord–tenant conflicts foreground insecurity and unequal access. Spatially, boundary/threshold and fragmentation emerge as the principal patterns, articulated through dispersed yet relationally connected houses, figures, and economic symbols. This cine-spatial thinking is externalized through a combination of textual, architectural, and diagrammatic representations alongside collage. Symbolic elements such as money, keys, scales, and "for sale" signs successfully translate abstract economic relations into recognizable visual forms (Figure 1; Table 3).



Figure 1. *Collective Imagination boards for (a)* 99 Homes *B1, (b)* 99 Homes *B2.*

99H-B2 focuses on the unstable relationship between displacement and socioeconomic power. The explicit textual distinction “Home ≠ House” frames dwelling beyond its physical form, emphasizing the loss of residential security. Spatial imagination here is characterized by fragmentation and interconnected trajectories, where dispersed figures and spatial fragments remain linked by route-like directional lines. A hybrid visual language—combining text, architectural representation, diagrammatic organization, and abstract graphic expression—is utilized. Eviction notices, property signs, and the “Home ≠ House” statement act as key symbolic devices translating instability into spatial form (Figure 1; Table 3).

Table 3. *Coding Summary of the Collective Imagination Boards for* 99 Homes

99 HOMES–B1	**IDENTIFIED CODES**	**KEY VISUAL SIGNS**
Conceptual Imagination	C1, C3, C4	Houses, foreclosure/sale signs, money, landlord–tenant relations, unemployment
Spatial Imagination	S2, S4	Houses and property boundaries; keys and foreclosure signs indicating access/exclusion; dispersed houses, figures, documents, and economic symbols
Visual Externalization	V1, V2, V3, V4, V5, V7	Written concepts, figures, buildings, relational lines, photographs/documents, money, keys, and scales
99 HOMES–B2		
Conceptual Imagination	C1, C3, C4, C5, C7	“Home ≠ House,” eviction notice, bank/for-sale sign, money, property–power–capitalism references, displaced figures, separated/isolated human figures
Spatial Imagination	S2, S3, S4, S8	Dividing lines and separated spatial fields; branching and intersecting routes; dispersed fragments; directional paths and figures positioned along movement trajectories
Visual Externalization	V1, V2, V3, V4, V5, V6, V7	Written concepts, human figures, houses/interiors, route-like lines and relational diagrams, pasted photographs/text fragments, colored hands and abstract fields, money/bank/property signs and “Home ≠ House” metaphor

Note. C = Conceptual Imagination; S = Spatial Imagination; V = Visual Externalization; B = Board.

99H-B3 explores interconnected themes of housing loss, precarity, and displacement. Houses and domestic interiors are juxtaposed with eviction notices, foreclosure signs, and temporary accommodations, portraying "home" as a vulnerable condition threatened by economic power. Spatially, the board merges fragmentation with a pronounced sense of movement: dispersed architectural and figurative elements are connected through directional arrows, constructing a sequential transition between housing, eviction, and temporary dwelling. Money, motel keys, and clocks serve as potent symbolic devices linking spatial

displacement to economic and temporal pressures (Figure 2; Table 4).



Figure 2. Collective Imagination boards for (a) *99 Homes* B3, (b) *99 Homes* B4.

99H-B4 constructs housing through the lens of socioeconomic inequality and displacement. Domestic interiors establish housing as an everyday spatial condition, while money, moving boxes, and contrasting residential environments highlight its inherent vulnerability. Spatial imagination is predominantly organized through enclosure, boundaries, and fragmentation. Framed interiors define enclosed domestic territories, a brick wall operates as a pronounced threshold, and discontinuous architectural scenes emphasize spatial rupture. These conditions are visualized through a hybrid language of figurative and architectural representations, translating housing insecurity into an experience structured by domestic enclosure and socioeconomic displacement (Figure 2; Table 4).

Table 4. *Coding Summary of the Collective Imagination Boards for* 99 Homes

99 HOMES–B3	IDENTIFIED CODES	KEY VISUAL SIGNS
Conceptual Imagination	C1, C3, C4, C5	Houses and domestic interiors, "home," eviction notice, foreclosure/bank sign, money and monetary values, motel, "homeless," "unemployed," "conscience," moving vehicle
Spatial Imagination	S2, S3, S4, S8	Interior–exterior transitions, separated houses/interiors, directional arrows connecting successive scenes, dispersed spatial fragments, house–motel–road sequence, vehicle and trajectory
Visual Externalization	V1, V2, V3, V4, V5, V6, V7	Cut-out words and written concepts, human figures, houses/interiors and motel, arrows and sequential relations, pasted eviction notice/photographic elements, graphic lines and lettering, money, motel key, foreclosure sign and clock
99 HOMES–B4		
Conceptual Imagination	C1, C3, C4, C5	Domestic interiors and houses, money, keys, moving boxes, displaced figures, contrasting housing conditions
Spatial Imagination	S1, S2, S4	Framed domestic interiors, brick wall and enclosed spaces, fragmented urban blocks, separated and overlapping spatial scenes
Visual Externalization	V2, V3, V4, V5, V7	Human figures, buildings and interiors, relational lines and spatial frames, photographic fragments, money, keys, wall and moving boxes

Note. C = Conceptual Imagination; S = Spatial Imagination; V = Visual Externalization; B = Board.

Capernaum: CAP-B1 constructs housing primarily through precarity, displacement, and social exclusion. Domestic space appears not as a stable refuge but as a deteriorated environment associated with homelessness, rootlessness, and loneliness. Spatial imagination is heavily dominated by fragmentation, enclosure, and boundaries—evident in interior scenes, ruined walls, and isolated figures distributed as discontinuous spatial episodes. The board communicates these conditions through textual concepts, architectural drawings, diagrammatic line systems, and collaged photographic imagery, effectively spatializing insecurity as an experience of disrupted belonging and social isolation (Figure 3; Table 5).



Figure 3. *Collective Imagination boards for (a)* Capernaum *B1, (b)* Capernaum *B2.*

CAP-B2 similarly conceptualizes dwelling through precarity and exclusion, associating the domestic environment directly with homelessness. Spatially, architectural and urban fragments are organized through boundaries, intersecting networks, and trajectories of movement. Radiating lines, dotted paths, and dispersed figures establish connection and transition as prominent spatial relationships, even within an overall condition of fragmentation. Recurring visual motifs—such as hands, a spiderweb, scissors, a bird, and pathways—operate as powerful metaphors, translating vulnerability and separation into visual forms. The board thus spatializes insecurity as a condition simultaneously shaped by fragmented dwelling, isolation, and continuous movement (Figure 3; Table 5).

Table 5. *Coding Summary of the Collective Imagination Boards for* Capernaum

CAPERNAUM-B1	IDENTIFIED CODES	KEY VISUAL SIGNS
Conceptual Imagination	C1, C4, C5, C7	Ruined and deteriorated dwellings; exposed brick walls; fragmented domestic interiors; children and family figures; *displacement*, *homelessness*, *loneliness*, *rootlessness*; isolated human figures
Spatial Imagination	S1, S2, S4	Enclosed domestic rooms; walls and openings; strongly framed interior scenes; ruined wall fragments; separated spatial episodes; disconnected linear/grid compositions
Visual Externalization	V1, V2, V3, V4, V5, V6	Written concepts; human/child figures; perspective and interior drawings; linear/grid systems; collaged photographic fragments and material imagery; abstract geometric line compositions
CAPERNAUM-B2		
Conceptual Imagination	C1, C4, C5, C7	Domestic and urban buildings; *shelter*, *homelessness*, *insecurity*; displaced/isolated figures; hands reaching toward figures; fragmented dwelling imagery
Spatial Imagination	S2, S3, S4, S8	Walls, framed spaces and openings; radiating and intersecting lines; interconnected spatial fragments; discontinuous urban/domestic scenes; roads, directional lines, dotted paths and moving figures
Visual Externalization	V1, V2, V3, V4, V6, V7	Written concepts; human figures and hands; buildings, walls, rooms and urban fabric; radiating lines and paths; abstract linear/color fields; spiderweb, hands, scissors, bird and pathways

Note. C = Conceptual Imagination; S = Spatial Imagination; V = Visual Externalization; B = Board.

Nomadland: NOM-B1 conceptualizes dwelling through the tension between mobility, precarity, and belonging. The explicit textual distinction between "houseless" and "homeless" separates physical shelter from emotional and social attachment, while references to being a nomad associate dwelling with individualized forms of belonging. Spatial imagination is overwhelmingly driven by movement and transition: a continuous winding road organizes otherwise fragmented domestic, urban, and natural environments into a sequence of changing spatial conditions. This road functions as the board's principal visual and spatial device, transforming nomadic mobility from a represented subject into the composition's organizing structure (Figure 4; Table 6).



Figure 4. Collective Imagination boards for (a) *Nomadland* B1, (b) *Nomadland* B2.

NOM-B2 focuses on migration, temporary habitation, and unstable belonging. The caravan/RV emerges as a mobile home, while textual references to being "addressless" challenge traditional associations of dwelling with permanent settlement. Movement and transition dominate the spatial imagination, reinforced by interconnected routes, maps, and road systems that frame mobility as a networked geographical condition. These ideas are expressed through a dense combination of figurative, architectural, collaged, and symbolic forms. Roots, maps, the eye, and cyclical motifs transform temporary dwelling into an interconnected visual system of place and mobility (Figure 4; Table 6).

Table 6. *Coding Summary of the Collective Imagination Boards for* Nomadland

NO-MADLAND-B1	IDENTIFIED CODES	KEY VISUAL SIGNS
Conceptual Imagination	C1, C2, C4, C5, C7	"I am houseless"; "I am not homeless"; "settled life"; "nomad"; "alone/lonely"; house and dwelling imagery; solitary figures; vehicle/road imagery; changing landscapes
Spatial Imagination	S2, S4, S8	Winding road as the main compositional axis; dispersed and separated spatial episodes; transitions between urban, domestic and natural environments; road intersections and trajectories; framed/partitioned spatial fragments
Visual Externalization	V1, V2, V3, V4, V5, V6, V7	Written concepts; solitary and paired human figures; houses/buildings and urban scenes; road-like compositional structure; inserted photographic images; abstract fields and graphic forms; road, sun, spiral/target and license plate motifs
NOMADLAND-B2		
Conceptual Imagination	C1, C2, C4, C5	RV/caravan as dwelling; "modern migration"; road and migration references; "addressless"; "temporary"; "nomad"; Amazon/work references; changing locations and landscapes
Spatial Imagination	S3, S4, S8	Interconnected road systems; maps and route-like networks; winding roads; dispersed spatial fragments; changing landscapes; vehicles/caravans; trajectories connecting different locations
Visual Externalization	V1, V2, V3, V4, V5, V6, V7	Written concepts; human silhouettes; caravan/dwelling and built-environment drawings; maps, routes and network-like lines; photographic images of RVs, landscapes and maps; abstract black forms and line patterns; road, eye, clock/cycle and root motifs

Note. C = Conceptual Imagination; S = Spatial Imagination; V = Visual Externalization; B = Board.

NOM-B3 foregrounds belonging, identity, and isolation as intersecting dimensions of the nomadic experience. Explicit questions like "who am I, what am I" shift the emphasis from dwelling itself toward the individual's unstable relationship with place and self. Spatial imagination is structured through fragmented environments, enclosed interiors, boundaries, and transitions. Vehicles and landscapes reinforce mobility, while enclosed perspectives and separated spatial episodes articulate isolation. The board ultimately visualizes mobility as an interconnected experience of spatial transition, uncertainty, and the continuous negotiation of identity (Figure 5; Table 7).



Figure 5. *Collective Imagination boards for (a)* Nomadland *B3, (b)* Nomadland *B4.*

Table 7. Coding Summary of the Collective Imagination Boards for *Nomadland*

NO-MADLAND-B3	IDENTIFIED CODES	KEY VISUAL SIGNS
Conceptual Imagination	C2, C4, C5, C7	"belirsizlik" [uncertainty]; "aidiyet" [belonging]; "kimim ben, neyim" [who am I, what am I]; "kırılıp vermek"; solitary figures; vehicles; temporary dwelling/living scenes; changing landscapes
Spatial Imagination	S1, S2, S4, S8	Enclosed room/interior perspectives; walls, openings and framed spaces; strongly separated spatial episodes; roads/routes and vehicles; transitions between interiors, landscapes and temporary dwelling environments
Visual Externalization	V1, V2, V3, V4, V5, V6	Written concepts and statements; human figures; perspective/interior drawings; arrows and relational lines; inserted photographic/film images; abstract geometric fields and layered graphic marks
NOMADLAND-B4		
Conceptual Imagination	C1, C2, C4, C5	"Yersiz yuva" [placeless home]; "geçici yuva" [temporary home]; "taşınabilen mahremiyet" [portable privacy]; "aidiyet kaybı" [loss of belonging]; repeated vans/caravans; road imagery; changing locations; temporary domestic settings
Spatial Imagination	S1, S3, S4, S8	Vehicle interiors and temporary enclosed living spaces; road and route systems; U.S. road-sign cluster; sequentially connected figures and vehicles; fragmented spatial episodes; arrows and movement paths
Visual Externalization	V1, V2, V3, V4, V5	Written concepts; repeated human figures; vans, interiors and spatial drawings; arrows, routes and sequential connections; photographs, road signs, license plates and appropriated printed material

Note. C = Conceptual Imagination; S = Spatial Imagination; V = Visual Externalization; B = Board.

NOM-B4 constructs the nomadic experience primarily through precarity and unstable belonging. Textual expressions such as “placeless home,” “temporary home,” and “portable privacy” frame dwelling as a provisional condition continuously reconstructed through movement, while “loss of belonging” explicitly highlights the erosion of place attachment and spatial identity. Spatially, this is articulated through networked connections: repeated vehicles, road signs, arrows, and sequentially positioned figures establish a continuous geography of transition. The board thus conceptualizes mobility not merely as travel between locations, but as a spatial condition in which privacy and belonging become portable and are repeatedly renegotiated (Figure 5; Table 7).

Parasite: PAR-B1 portrays dwelling through socioeconomic inequality, precarity, and conflict. References to class, parasitic dwelling, and upper–lower relations frame housing as a spatial manifestation of unequal power dynamics. Spatial imagination is dominated by hierarchy, boundaries, and fragmentation. Stairs, thresholds, contrasting levels, and disconnected architectural fragments translate social stratification into a vertically discontinuous spatial structure. Money, parasite imagery, and vertical positioning operate metaphorically, transforming economic disparity into a spatial opposition between dominance and precarity, access and separation (Figure 6; Table 8).

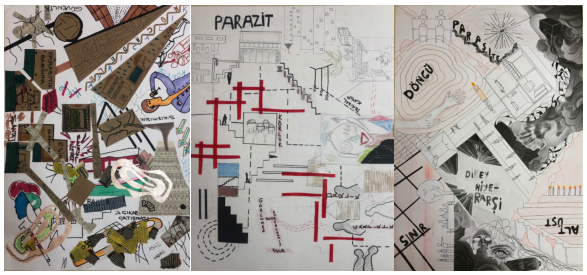

Figure 6. Collective Imagination boards for (a) *Parasite* B1, (b) *Parasite* B2, (c) *Parasite* B3.

Table 8. *Coding Summary of the Collective Imagination Boards for* Parasite

PARASITE-B1	IDENTIFIED CODES	KEY VISUAL SIGNS
Conceptual Imagination	C3, C4, C6	“Parazitik barınma” [parasitic dwelling], “eşik barınmak” [dwelling at the threshold], “çıkış çatışması” [conflict of exit], “sınıf,” “aşağı/yukarı”; money; contrasting dwelling representations; figures positioned through vertical relations
Spatial Imagination	S2, S4, S5	Repeated thresholds and framed openings; stair-like and vertical configurations; upper/lower positioning; fragmented architectural components; separated spatial zones; contrasting spatial levels
Visual Externalization	V1, V2, V3, V4, V5, V6, V7	Written concepts; human figures; windows, stairs, interiors and architectural fragments; relational lines and directional compositions; newspaper clippings and photographic material; abstract geometric forms; money, parasite/insect imagery, stairs and verticality as symbolic devices
PARASITE-B2		
Conceptual Imagination	C3, C4, C7	“poverty,” “wealth,” “class,” “invisibility,” “parasite,” “pollution”; contrasting upper/lower positions; separated figures; basement-like spaces; spatial differentiation between social groups
Spatial Imagination	S1, S2, S4, S5	Enclosed interiors and basement-like spaces; repeated stairs; strong red barriers/lines; separated spatial compartments; upper/lower levels; isolated figures; discontinuous architectural fragments
Visual Externalization	V1, V2, V3, V4, V6, V7	Written concepts; human figures and body fragments; stairs, interiors, buildings and spatial sections; dashed routes and relational lines; dominant red/black linear graphics; stairs, vertical positioning, eye/body imagery and barriers as symbolic devices

Note. C = Conceptual Imagination; S = Spatial Imagination; V = Visual Externalization; B = Board.

PAR-B2 constructs inequality through a strongly hierarchical and segregated spatial imagination. Explicit references to poverty, wealth, invisibility, and parasitism frame social difference as both precarious and exclusionary. This distinction is spatially articulated through enclosed interiors, repeated thresholds, and most prominently, vertical hierarchy. Stairs, isolated figures, and strong linear barriers transform social stratification into a spatial system of dominance. Repeated stairs function as metaphors for socioeconomic hierar-

chy, while red barriers reinforce the stark distinction between inclusion and exclusion (Figure 6; Table 8).

Table 9. *Coding Summary of the Collective Imagination Boards for* Parasite

PARASITE-B3	IDENTIFIED CODES	KEY VISUAL SIGNS
Conceptual Imagination	C3, C6, C7	"cycle," "hierarchy," "class," "vertical hierarchy"; opposing hands; isolated figures; confronting spatial positions; dark/light contrasts; separation between social positions
Spatial Imagination	S2, S4, S5	Repeated stairs and vertical levels; sectional house; upper/lower positioning; strong intersecting boundaries; separated figures and spatial zones; fragmented architectural scenes
Visual Externalization	V1, V2, V3, V4, V6, V7	Written concepts; hands, human figures, eye and skull; house section, stairs and interior spaces; relational lines and directional organization; black masses, linear patterns and contrasting fields; stairs, eye, skull, candle and opposing hands as symbolic devices

Note. C = Conceptual Imagination; S = Spatial Imagination; V = Visual Externalization; B = Board.

PAR-B3 highlights power, conflict, and exclusion. References to class and hierarchy frame social difference as a system shaped by unequal power relations. Spatial imagination heavily relies on boundaries, fragmentation, and vertical hierarchy. Sectional representations, repeated stairs, and upper–lower positioning organize a vertically stratified spatial order. Conflict is visually reinforced through opposing hands and strong dark–light divisions, transforming class inequality into a rigid spatial system structured by confrontation, visibility, and exclusion (Figure 6; Table 9).

The Florida Project: FLOR-B1 interprets the narrative primarily through spatial differentiation, exclusion, and hierarchy. Contrasting spatial conditions and separated figures foreground inequality, making social and spatial differentiation the board's central focus. Spatial imagination is characterized by boundaries, hierarchy, and transition—articulated through doors, stairs, differentiated levels, circulation routes, and layered architectural configurations. This repeated emphasis on thresholds constructs space as a sequence of differentiated conditions that must be actively negotiated by the users (Figure 7; Table 10).



Figure 7. *Collective Imagination boards for (a)* Florida Project *B1, (b)* Florida Project *B2, (c)* Florida Project *B3.*

FLOR-B2 emphasizes precarity, uncertainty, and exclusion. Conceptual imagination is articulated through explicit references to the unknown, safety versus insecurity, and vulnerability. Spatially, the board is dominated by boundaries, fragmentation, and transition. Branching roads, directional paths, and spatially separated destinations construct an environment of discontinuous and uncertain movement. Burning houses, a syringe, and branching routes translate these conditions into a visual-spatial language of vulnerability and separation (Figure 7; Table 10).

Table 10*. Coding Summary of the Collective Imagination Boards for* Florida Project

FLORIDA PROJECT-B1	IDENTIFIED CODES	KEY VISUAL SIGNS
Conceptual Imagination	C3, C7	Contrasting spatial conditions, separated figures, constrained spaces, spatial differentiation
Spatial Imagination	S2, S5, S8	Thresholds and doors, boundaries, stairs, layered spatial levels, circulation routes, transitional paths
Visual Externalization	V1, V2, V3, V4, V6	Spatial keywords, human figures, architectural perspectives and sections, circulation lines, geometric spatial diagrams
FLORIDA PROJECT-B2		
Conceptual Imagination	C4, C7	"uncertainty," "unknown," "safe/unsafe," "exclusion," isolated figure, burning houses, contrasting protected and vulnerable conditions
Spatial Imagination	S2, S4, S8	"boundary," "threshold," branching roads, divided spatial zones, stairs, directional routes, disconnected destinations
Visual Externalization	V1, V2, V3, V4, V6, V7	Written concepts, human figures, houses and buildings, branching paths and arrows, graphic fields, burning houses, syringe, helicopter, tree/root imagery

Note. C = Conceptual Imagination; S = Spatial Imagination; V = Visual Externalization; B = Board.

FLOR-B3 explores the intersecting conditions of inequality, exclusion, and solidarity. Explicit references to discrimination and racism are contrasted with representations of collective figures and family. Spatial imagination balances connection and fragmentation: dispersed social and architectural scenes remain visually discontinuous, yet a network of dashed lines establishes relationships across the board. The juxtaposition of appropriated imagery, commercial settings, fire, and relational lines transforms social marginalization into a fragmented narrative, while images of togetherness introduce community and solidarity as a distinct counterpoint to exclusion (Figure 7; Table 11).

Table 11. *Coding Summary of the Collective Imagination Boards for* Florida Project

FLORIDA PROJECT-B3	IDENTIFIED CODES	KEY VISUAL SIGNS
Conceptual Imagination	C3, C4, C7, C8	"difference," "discrimination," "racism," "exclusion," "being a family," "not being a family"; contrasting social groups; motel/hotel imagery; burning vehicle; isolated and grouped figures; children holding hands
Spatial Imagination	S3, S4	Dashed lines connecting dispersed scenes; multiple spatial/social fragments distributed across the board; relational organization between otherwise separated visual units
Visual Externalization	V1, V2, V3, V4, V5, V7	Cut-out words, drawn human figures, motel/hotel and commercial buildings, dashed relational lines, appropriated photographic/magazine imagery, silhouettes and symbolic scenes of fire, separation and togetherness

Note. C = Conceptual Imagination; S = Spatial Imagination; V = Visual Externalization; B = Board.

Cross-Board Analysis

The cross-board analysis reveals distinct patterns of convergence and differentiation. At the conceptual level, Precarity/Insecurity (C4) was the most recurrent code, appearing in 14 of the 16 boards, followed closely by Isolation/Exclusion (C7) in 10 boards. Housing/Home (C1), Inequality/Power (C3), and Mobility/Displacement (C5) also recurred substantially, each appearing in nine boards. This distribution indicates that collective interpretations were predominantly organized around conditions of instability, social differentiation, and displacement. Conversely, Conflict/Resistance (C6) and Community/Solidarity (C8) occurred only occasionally, suggesting that oppositional and solidaristic interpretations were less prominent within the dataset (Table 12).

Table 12. *Cross-board coding patterns of collective cine-spatial imagination*

Film	Board (B)	Conceptual (C)	Spatial (S)	Visual (V)
99 Homes	99H-B1	C1, C3, C4	S2, S4	V1, V2, V3, V4, V5, V7
	99H-B2	C1, C3, C4, C5, C7	S2, S3, S4, S8	V1–V7
	99H-B3	C1, C3, C4, C5	S2, S3, S4, S8	V1–V7
	99H-B4	C1, C3, C4, C5	S1, S2, S4	V2, V3, V4, V5, V7
Capernaum	CAP-B1	C1, C4, C5, C7	S1, S2, S4	V1–V6
	CAP-B2	C1, C4, C5, C7	S2, S3, S4, S8	V1–V4, V6, V7
Nomadland	NOM-B1	C1, C2, C4, C5, C7	S2, S4, S8	V1–V7
	NOM-B2	C1, C2, C4, C5	S3, S4, S8	V1–V7
	NOM-B3	C2, C4, C5, C7	S1, S2, S4, S8	V1–V6
	NOM-B4	C1, C2, C4, C5	S1, S3, S4, S8	V1–V5
Parasite	PAR-B1	C3, C4, C6	S2, S4, S5	V1–V7
	PAR-B2	C3, C4, C7	S1, S2, S4, S5	V1–V4, V6, V7
	PAR-B3	C3, C6, C7	S2, S4, S5	V1–V4, V6, V7
The Florida Project	FLOR-B1	C3, C7	S2, S5, S8	V1–V4, V6
	FLOR-B2	C4, C7	S2, S4, S8	V1–V4, V6, V7
	FLOR-B3	C3, C4, C7, C8	S3, S4	V1–V5, V7
Frequency	**(n = 16)**	**C1=9; C2=4; C3=9; C4=14; C5=9; C6=2; C7=10; C8=1**	**S1=5; S2=13; S3=6; S4=15; S5=4; S6=0; S7=0; S8=9**	**V1=15; V2=16; V3=16; V4=16; V5=11; V6=12; V7=12**

A stronger degree of convergence is evident in Spatial Imagination. Fragmentation/Discontinuity (S4) was identified in 15 of the 16 boards, indicating that cinematic experience was overwhelmingly spatialized through separated episodes, divided spatial fields, and juxtapositions. Boundary/Threshold (S2) structured these imaginaries in 13 boards through conditions of access and separation, while Movement/Transition (S8) introduced sequential spatial relations in nine boards. Notably, predefined spatial categories like Density/Conges-

tion (S6) and Openness/Accessibility (S7) were absent, indicating they did not emerge as dominant modes of spatial interpretation.

The strongest convergence occurred in Visual Externalization. Figurative (V2), Architectural (V3), and Diagrammatic Representation (V4) were present in all 16 boards, with Textual Expression (V1) occurring in 15. This demonstrates a consistently multimodal representational repertoire. Human figures, architectural drawings, relational diagrams, and symbolic elements were seamlessly combined to articulate relationships between narrative interpretation and spatial thinking across the dataset (Table 12).

Relational Patterns

While frequency distributions highlight dataset-wide tendencies, distinguishing shared from narrative-sensitive forms of cine-spatial reasoning required examining code co-occurrences. The relational patterns identified in the coding matrix were therefore classified based on their distribution across the dataset. Associations occurring in no more than two boards were classified as *emerging/limited* and were not interpreted as general tendencies. Among the remaining associations, those identified in at least three different film groups were categorized as *cross-film*. Alternatively, associations appearing in at least three boards—and present in all boards of a single film group while remaining proportionally rare or absent elsewhere—were classified as *film-sensitive* (provided they did not meet the cross-film criterion). Furthermore, when a cross-film association appeared in all boards of one particular film group at a notably higher proportion than the others, this concentration was described as *intensified*. These dataset-specific descriptive criteria were deliberately structured to account for the unequal number of boards per film (Tables 13, 14).

Table 13. *Dominant relational patterns in collective cine-spatial imagination*

Conceptual Codes	Co-occurring Spatial Code(s)	Characteristic Visual Externalization	Pattern
Precarity/Insecurity (C4)	Fragmentation/Discontinuity (S4)	Multimodal; collage and symbolic representation recurrent	Cross-film
Mobility/Displacement (C5)	Movement/Transition (S8) + Fragmentation/Discontinuity (S4)	Collage; graphic and route-based representation	Cross-film, intensified in *Nomadland*
Belonging/Identity (C2)	Movement/Transition (S8)	Collage, routes, symbols, and appropriated imagery	Film-sensitive (*Nomadland*)
Inequality/Power (C3)	Boundary/Threshold (S2) + Hierarchy/Spatial Dominance (S5)	Symbolic and diagrammatic articulation	Film-sensitive, intensified in *Parasite*
Isolation/Exclusion (C7)	Boundary/Threshold (S2)	Graphic/abstract and symbolic representation	Cross-film
Conflict/Resistance (C6)	Hierarchy/Spatial Dominance (S5)	Graphic/abstract and symbolic representation	Emerging; limited cases

The relational analysis revealed recurring co-occurrences. Precarity/Insecurity (C4) co-occurred with Fragmentation/Discontinuity (S4) in all 14 boards where C4 appeared, though this must be contextualized by the near-ubiquity of S4 across the dataset. More differentiated relationships emerged among less pervasive codes: Mobility/Displacement (C5) co-occurred with Movement/Transition (S8) in seven of nine boards. Belonging/Identity (C2), heavily concentrated in the Nomadland boards, co-occurred with S8 in all four instances, utilizing routes and temporary dwellings to articulate identity. Inequality/Power (C3) showed a highly concentrated co-occurrence with Hierarchy/Spatial Dominance (S5), particularly in Parasite, where vertical positioning articulated social hierarchy. Isolation/Exclusion (C7) strongly co-occurred with Boundary/Threshold (S2) in nine of ten boards.

Considered collectively, these associations prove that cinematic concepts were not merely reproduced as literal references; rather, they were structurally reorganized through identifiable spatial and representational relationships. The coexistence of cross-film patterns (shared modes of cine-spatial reasoning) and film-sensitive configurations (specific narrative characteristics shaping representations) indicates that collective imagination functioned as a powerful mediating process through which cinematic narratives were collectively rearticulated in spatial terms.

Table 14. *Film-level distribution of conceptual–spatial code co-occurrences*

Code Association	99H (n=4)	CAP (n=2)	NOM (n=4)	PAR (n=3)	FLOR (n=3)	Total
C4–S4	4	2	4	2	2	14
C5–S8–S4	2	1	4	0	0	7
C2–S8	0	0	4	0	0	4
C3–S2–S5	0	0	0	3	1	4
C7–S2	1	2	2	2	2	9
C6–S5	0	0	0	2	0	2

Note. *Counts represent the number of boards in which the listed codes co-occurred, with all three codes required for three-code associations. 99H = 99 Homes; CAP = Capernaum; NOM = Nomadland; PAR = Parasite; FLOR = The Florida Project.*

Discussion

The findings reveal recurrent associations between socially grounded concepts and spatial relationships across the collective imagination boards. Narrative conditions—such as precarity, displacement, inequality, exclusion, and belonging—were consistently rearticulated through spatial conditions like fragmentation, boundaries, movement, and hierarchy. These patterns suggest that cinema can actively support spatial thinking in architectural education by directing students' attention to the relational dimensions of space, including separation, social differentiation, and power dynamics. Within a pre-design context, cinematic narratives provide an experiential framework through which students can engage with these complex spatial relationships before generating formal architectural propositions. This aligns with studies framing cinema as an experimental pedagogical medium for spatial exploration (Bergera, 2018; Erdoğan & Akarsu, 2023; Park & Kim, 2021). The present findings extend this perspective by demonstrating how cinematic interpretations can be collectively materialized and spatialized prior to formal design development. Furthermore, the relational findings suggest that collective imagination serves as a crucial intermediate framework linking narrative experience with spatial reasoning. As the analysis demonstrated, students reorganized conceptual interpretations into spatial relationships using multiple representational modes. The coexistence of cross-film patterns and film-sensitive configurations is particularly revealing. While cross-film patterns highlight shared modes of cine-spatial reasoning across different narratives, film-sensitive configurations reflect the unique socio-spatial conditions of specific films. For instance, in Nomadland, belonging and mobility were articulated predominantly through movement, routes, and transitional spaces; conversely, in Parasite, socioeconomic inequality was spatialized through rigid vertical hierarchy, stairs, and upper–lower relations. Thus, collective imagination successfully accommodates both universal spatial reasoning and highly contextual narrative interpretations within a single pre-design process.

The consistently multimodal character of the boards reinforces this mediating role. The integration of figurative, architectural, diagrammatic, textual, and collaged forms indicates that cine-spatial thinking relies on a hybrid representational repertoire extending well beyond conventional architectural drawing. Such hybridity is highly valuable in pre-design learning, where emerging spatial ideas often lack the definition required for formal drafting. The boards function as an intermediate representational environment where narrative meanings, social relations, and architectural elements become collectively visible, interconnected, and available for critique. This inherently relational character aligns with contemporary theories conceptualizing imagination as a dialogical and situated practice (García Galiot, 2026; Glăveanu et al., 2025).

While the artifacts render the outcomes of this collective production visible, the specific interpersonal negotiations involved in their creation remain beyond the scope of this analysis. From a pedagogical standpoint, collective imagination provides a shared setting for students to externalize and negotiate emerging spatial concepts. However, it is important to distinguish pedagogical potential from measurable educational effectiveness. The findings of this study are bounded by its specific context, relying on 16 boards generated in response to five films. While the boards evidence collective representation, they cannot isolate individual cognitive processes, and the observed code co-occurrences indicate associations rather than causal or sequential transformations. Furthermore, this study does not trace whether these pre-design relationships directly influenced final architectural outcomes. Future research incorporating student reflections, process observations, and subsequent design products could clarify how these initial cine-spatial relationships transfer into later stages of the design studio.

Ultimately, this study conceptualizes cinema-induced collective imagination as a robust pre-design process and an intermediate representational framework. By translating socially grounded interpretations of film into multimodal spatial relationships, it makes emerging spatial thought visible and relational. Within the scope of these findings, collective imagination provides architectural education with a structured yet open-ended method for integrating cinematic narratives into design learning, fostering collective negotiation without prematurely prescribing formal architectural solutions.

Conclusion

This study investigated how cinematic narratives stimulate collective spatial imagination in architectural education and how this process materializes through the collective imagination method. Focusing on the intermediate stage of pre-design learning, the analysis traced how cinematic experiences are collaboratively interpreted, spatially reorganized, and visually externalized prior to formal architectural development. The findings reveal a tightly interconnected structure across conceptual, spatial, and representational dimensions. Socially grounded concepts consistently aligned with relational spatial conditions—such as fragmentation, boundaries, movement, and hierarchy—rendered explicit through a multimodal representational repertoire. Crucially, the coexistence of recurrent *cross-film* patterns and *narrative-sensitive* configurations demonstrates that students generated both shared modes of spatial reasoning and highly contextual interpretations driven by specific films. Consequently, cinematic storytelling proves to be a robust foundation for cultivating diverse, relationally structured spatial interpretations during the pre-design phase.

The principal contribution of this research lies in conceptualizing collective imagination as an intermediate representational framework that bridges cinematic experience and spatial thinking. The shared board functions as a dynamic environment where narrative meanings, social relations, and spatial configurations are rendered visible, interconnected, and open to collaborative critique. Ultimately, this study expands the pedagogical role of cinema in architectural education, reframing films as active catalysts for interpretive spatial reasoning rather than mere subjects of analysis. By highlighting collective visual production, the research demonstrates how nascent spatial ideas can be negotiated before solidifying into formal architecture.

However, these pedagogical potentials must be contextualized within the study's limitations. As an artifact-based investigation, it does not measure individual cognitive changes or evaluate subsequent design performance. Furthermore, the selected films shared thematic concerns—housing, displacement, and precarity—which likely influenced the recurring conceptual patterns. The common assignment brief, instructor guidance, and collage-based medium may have also driven representational similarities, though their precise impacts cannot be isolated here. Future research

should track these initial cine-spatial relationships into later studio stages, investigating which conceptual and spatial configurations persist, evolve, or dissolve as collective imagination matures into concrete architectural propositions.

Declarations

Funding: The author declares that no funding was received for this research.

Conflict of Interest: The author declares that there is no conflict of interest regarding the research, authorship, and/or publication of this article.

Ethical Approval: This study does not require ethics committee approval, as it is based on the analysis of published sources and publicly available documents and data.

Ethics Statement: The author declares that scientific and ethical principles were followed throughout the research and preparation of this manuscript and that all sources used have been duly acknowledged and cited.

AI Disclosure: The author declares that no artificial intelligence (AI) or AI-assisted technologies were used in the writing, editing, or preparation of this manuscript.

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