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REVIEW

Territory and learning: a review of educational design and spatial justice

Territorio y aprendizaje: revisión sobre diseño educativo y justicia espacial

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ABSTRACT

This article presents a critical review of the literature on the intersection of education, territory, and the built environment, with an emphasis on contemporary approaches that view space as an active agent of learning. Through the analysis of recent research (2020–2024), four thematic axes are identified: pedagogies of territory, spatial design as a pedagogical mediator, ethical dimensions of the built environment, and epistemological gaps in the field. The reviewed studies highlight the value of situated pedagogical practices, the potential of participatory design, and the need to integrate frameworks of spatial justice, intersectionality, and sustainability. However, there is a predominance of cases from the Global North, poor articulation between disciplines, and limited incorporation of critical perspectives in educational architecture. A research agenda is proposed aimed at promoting inclusive, culturally contextualized, and socially engaged learning spaces. This work seeks to contribute to the dialogue between architecture, pedagogy, and territorial studies, inviting us to imagine spaces that not only teach, but also care, listen, and transform.

Keywords: Educational Architecture; Territorial Pedagogy; Participatory Design; Spatial Justice; Built Environment.

RESUMEN

Este artículo presenta una revisión crítica de literatura sobre la intersección entre educación, territorio y entorno construido, con énfasis en enfoques contemporáneos que conciben el espacio como agente activo del aprendizaje. A través del análisis de investigaciones recientes (2020–2024), se identifican cuatro ejes temáticos: pedagogías del territorio, diseño del espacio como mediador pedagógico, dimensiones éticas del entorno construido y vacíos epistemológicos en el campo. Los estudios revisados destacan el valor de prácticas pedagógicas situadas, el potencial del diseño participativo y la necesidad de integrar marcos de justicia espacial, interseccionalidad y sostenibilidad. Sin embargo, se observa una predominancia de casos del Norte Global, escasa articulación entre disciplinas y limitada incorporación de perspectivas críticas en la arquitectura educativa. Se propone una agenda de investigación orientada a promover espacios formativos inclusivos, culturalmente contextualizados y socialmente comprometidos. Este trabajo busca contribuir al diálogo entre arquitectura, pedagogía y estudios territoriales, invitando a imaginar espacios que no solo enseñen, sino que también cuiden, escuchen y transformen.

Palabras clave: Arquitectura Educativa; Pedagogía del Territorio; Diseño Participativo; Justicia Espacial; Entorno Construido.

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INTRODUCTION

In recent decades, concern for how the built environment affects social processes has gained increasing attention in disciplines such as sociology, pedagogy, architecture, and urban planning. Among these concerns, the relationship between space and education is revealed as a fertile, though still little systematized, field for thinking about social and territorial transformations.[1] Space is not only a physical support or a passive background where learning takes place; it is also an active agent, a symbolic and material dimension that conditions, enables, and resignifies educational practices and social links.[2,3]

In this context, the concept of pedagogies of territory emerges strongly, which allows us to understand how formal and informal, constructed or natural places can become scenarios for learning, socialization, and subjectification. From schools as infrastructure to public spaces, urban gardens, cultural centers, and squares, designed environments have a decisive impact on the possibilities of inclusion, agency, and citizenship.[4,5,6] At the same time, these spaces result from social contestations, planning decisions, and normative frameworks that respond to particular visions of development, sustainability, and education.[7]

This article aims to critically review the literature that explores the intersection between education, territory, and the design of the built environment. In particular, it seeks to identify and analyze the main conceptual frameworks that have addressed this relationship from critical, interdisciplinary, and social transformation-oriented approaches. The review focuses on three axes: (1) the theoretical foundations that conceive of territory as a pedagogical space; (2) the role of architecture and landscape in the production of educational experiences; and (3) the ethical and political implications of spatial design in contexts of inequality and socio-environmental change.

The methodology used is a narrative review of scientific and essayistic literature published in the last two decades, selecting relevant texts in critical education, urban sociology, architectural design, and territorial studies. Priority has been given to literature that adopts an integrative perspective, with particular attention to the realities of the Global South and to emancipatory pedagogies that conceive of space as a tool for collective transformation.[8,9,10]

This work ultimately aims to contribute to the dialogue between pedagogy and architecture, disciplines that rarely intersect in analyzing territory. Recognizing the educational potential of the physical environment is fundamental to imagining spatial practices that are not only functional or sustainable but also educational, inclusive, and culturally meaningful.

METHOD

This article is framed as a narrative and critical review of academic literature. Unlike systematic reviews oriented toward quantitative empirical studies, the evaluation presented here aims primarily at conceptual systematization and identification of theoretical frameworks, critical approaches, and emerging trends around the intersection between education, space, and built environment design.[11]

A qualitative and exploratory strategy was adopted, guided by an interdisciplinary interest in critical pedagogy, urban sociology, educational architecture, and territorial studies.[12] The emphasis was placed on the epistemological diversity of the sources, valuing both foundational texts and recent research contributing to the debate on space's pedagogical and ethical potential.

The literature search was conducted using the Consensus platform, which provides access to peer-reviewed scientific literature. Priority was given to the selection of texts published between 2020 and 2024 to integrate contemporary contributions, with special attention to studies that:

- Propose critical or alternative approaches to traditional educational design.
- Address space as an active agent of learning.
- Incorporate notions of spatial justice, participation, or sustainability.
- Articulate architecture, territory, and educational processes.

Keywords used included educational architecture, learning space, spatial justice, territory and pedagogy, participatory design, urban education, and built environment and learning.

Texts focusing exclusively on technical aspects of architectural design without any connection to the educational dimension were excluded, as were those with an exclusively normative or instrumental approach to space.

Once the relevant texts had been selected and analyzed, an inductive categorization process was carried out, grouping the findings into four principal thematic axes:

1. Foundational theoretical frameworks on situated learning and pedagogies of territory.
2. The built environment as a pedagogical agent.
3. Ethical and political dimensions of educational-territorial design.
4. Gaps and convergences in recent literature.

This procedure allowed us to map the current state of knowledge and identify areas of opportunity for new research, which are collected in the corresponding section.

RESULTS

The built environment as a pedagogical agent

Architectural design and the configuration of the built environment directly influence educational experiences, both formal and informal. This impact is not only limited to school buildings but extends to public, urban, and natural spaces, transforming learning into a spatial and relational phenomenon.[13]

Educational environments have evolved from rigid, hierarchical classrooms to flexible, participatory, and emotionally responsive configurations.[14] Recent evidence shows hybrid spaces - those that integrate diverse physical and symbolic qualities - foster collaborative creativity and active learning by providing opportunities for social interaction, experimentation, and symbolic appropriation of space.[15] These spatial configurations allow for transitions between divergent and convergent cultures, the collective and the individual, and between the concrete and the abstract, facilitating more inclusive and meaningful learning.

Community architecture has proven to be a powerful tool for strengthening the social fabric and promoting intergenerational educational activities. Through participatory design and construction processes, local communities have managed to resignify the use of public spaces, turning them into nodes of informal learning and social coexistence.[16] These experiences reveal the potential of architecture as a mediator of culturally situated educational processes.

Furthermore, recent studies highlight the importance of student participation in the design of shared spaces in educational institutions, especially at the higher education level. The participatory methodology allows users' needs, desires, and everyday practices to be incorporated into the design, thus promoting a sense of belonging and spatial agency.[17] This trend is aligned with proposals that consider architecture as a physical container and a social language that communicates values, enables interactions, and shapes subjectivities.

From an institutional perspective, it has been proposed that architectural design and educational planning be integrated into a unified framework that ensures coherence between pedagogy, infrastructure, and community. The Constructing Education framework, for example, highlights the need to link the building process with a participatory educational vision from the outset of the project, ensuring that school spaces reflect shared pedagogical values and are adaptable to the needs of teachers and students.[18]

The built environment not only conditions learning but can actively enhance it when it is designed with pedagogical, cultural, and participatory criteria. These new approaches demand architecture that listens, adapts, and facilitates transformative educational experiences.

Ethical and political dimensions of educational-territorial design

The design of learning environments is not neutral. Every architectural or urban planning decision is ethically and politically charged, involving implicit definitions of who can learn, how, and under what conditions. From this perspective, architecture and spatial planning are also mechanisms of inclusion or exclusion, capable of reproducing inequalities or promoting social and spatial justice.

The theory of spatial justice has emerged as a robust conceptual framework for analyzing how physical space forms relate to power relations, unequal access to resources, and symbolic representation.[19] Applied to education, this perspective makes visible how specific spatial configurations reinforce social hierarchies or limit the participation of historically marginalized groups. For example, closed, homogenous, and standardized school models ignore the cultural, generational, and territorial diversities of the communities they serve.

In response, there has been a growing interest in participatory design methodologies, especially in educational processes, where it is recognized that students can actively contribute to the shaping of their environment. Recent studies show that when young people are involved in redesigning school spaces, they gain a sense of belonging and develop agency and critical capacities concerning their environment.[20]

These practices have also been extended to urban space. For example, the 'macro-school' or city-as-school approach proposes blurring the boundaries between educational space and urban space, promoting a territorial, environmental, and citizen pedagogy. This vision physically reconfigures the territory and decentralizes pedagogical authority, recognizing multiple knowledge and agents in the educational process.[21]

The notion of unequal spatial narrative has also been explored as an ethical dimension of design. Spatial decisions reflect and perpetuate the dominant values of elites, marginalizing the memory and experiences of subaltern groups. In this sense, participatory art and tactical urbanism have emerged as strategies of cultural resistance that make these tensions visible and open spaces for new ways of cohabiting, remembering, and learning in the city.[22]

Thinking about educational design from an ethical perspective implies asking not only how space is constructed but also for whom and with whom. Incorporating principles of spatial justice and participation in architectural and urban design processes allows us to move towards more equitable, critical, and contextualized learning environments.

Agenda for future research

This review reveals a fertile but fragmented field around the design of the built environment as a pedagogical and social agent (see table 1). In order to move towards a critical, inclusive, and situated practice of educational-territorial design, it is necessary to consolidate a research agenda that promotes more interdisciplinary, contextually informed, and ethically engaged approaches. In this sense, four priority lines are proposed:

Decentralizing knowledge: incorporating voices and practices from the Global South

Studies are overrepresented in Global North contexts, which limits understanding of the relationships between education, space, and inequality in regions such as Latin America, Africa, and Southeast Asia. Future studies should document, analyze, and make emerging pedagogical and architectural experiences visible in territories marked by urban informality, social conflict, and structural exclusion.[23,24]

Deepening the critical perspective: integrating frameworks of spatial justice, feminism, and decoloniality

The analysis of educational space requires theoretical tools to denaturalize how power, access, and visibility are distributed in the built environment. Proposals of spatial justice,[19] intersectional feminism,[25] and decolonial design open up opportunities to rethink notions of participation, agency, and habitability from other epistemologies.

Innovating participatory and collaborative methodologies

While co-design has been widely promoted, it is still necessary to develop methodologies that effectively articulate the participation of students, communities, and educational agents in all phases of space design and evaluation. This implies adopting techniques such as responsive mapping, visual devices, participatory ethnography, or immersive technologies.[20,26]

Building bridges between research and action in public policy

There is an urgent need to advance the link between academic research and public policy-making in urban planning, education, and architecture. The design of the built environment must be addressed as part of integrated strategies for territorial development, educational justice, and sustainability. This requires studies assessing spatial interventions' social impact and generating proper evidence for participatory and inclusive planning.

Table 1. Synthesis of results by thematic axis

Thematic Axis	Key Findings	Relevant References
1. Situated education and territorial pedagogies	Learning is conceived as social and contextual. Pedagogies of place that integrate the natural and urban environment are promoted.	[21]
2. Built environment as a pedagogical agent	Flexible and participatory spatial designs promote creativity, ownership and active learning.	[15,17]
3. Ethical and political dimensions of design	Architecture can reproduce inequalities or generate spatial justice. Co-design enhances educational equity.	[20,22]
4. Gaps and tensions in literature	Predominance of Global North studies. Lack of Global South perspectives, limited critical approach and limited intersectionality..	[23,25]

DISCUSSION

This research allowed us to identify four major thematic axes that structure the contemporary debate on the relationship between education, space, and the design of the built environment. These axes bring together the most relevant conceptual contributions and the main methodological, ethical, and contextual trends identified in recent studies.

The first axis corresponds to the pedagogies of territory and situated learning, where it is reaffirmed that learning is not a universal or abstract process but is deeply rooted in social, cultural, and spatial relations. Several studies underline the value of the urban and natural environment as an active agent in the formation of subjects. This idea is particularly present in the concept of the city as a 'macro-school,' which seeks to dissolve the boundaries between school and urban spaces, promoting the educational appropriation of the city through the pedagogical use of public and natural spaces.[21] This approach coincides with ecological and critical perspectives on education that propose a reconnection between learning, territory, and sustainability.

The second thematic axis refers to the built environment as a pedagogical agent. Recent research emphasizes the impact of intentionally designed spaces on the quality of learning. Physical environments with hybrid qualities - integrating private and collective, concrete and abstract dimensions - have facilitated creativity, collaboration, and a sense of belonging in diverse educational contexts.[15] Similarly, the design of shared spaces in universities, when done in a participatory manner, better integrates the real needs of students and fosters their agency within the academic environment.[17]

The third axis addresses spatial design's ethical and political dimensions, especially from the perspective of spatial justice. Several studies have shown that design decisions are not neutral: they reflect worldviews that may exclude certain bodies, memories, and cultures. Therefore, it has been proposed to incorporate co-design processes with educational communities, where children, young people, and teachers actively transform school space according to their values, rhythms, and specific needs.[20] In a complementary way, it has been studied how artistic and symbolic practices - such as immaterial monuments or public art - can be used as educational tools to dispute dominant spatial narratives and make excluded memories visible.[22]

Finally, the fourth axis makes some gaps and tensions within the field visible. First, there is a clear overrepresentation of studies located in the Global North, with little documentation of experiences in territories of the Global South, where the dynamics of educational exclusion and spatial inequality are more intense.[23] Secondly, although participatory discourse is widely promoted, its concrete application encounters limits when confronted with hierarchical institutional structures, as observed in co-design experiences within academic architecture programs.[27] Finally, few studies explicitly integrate intersectional or decolonial approaches, which limits current proposals' critical and transformative potential.

Overall, the results show a field in expansion and transformation that still requires greater epistemological, geographical, and political integration to respond to the urgent challenges of situated, equitable, and territorially aware education.

CONCLUSION

This literature review has made visible the conceptual, methodological, and political richness that emerges when exploring the intersection between education, territory, and the built environment. From a critical and interdisciplinary perspective, it is reaffirmed that educational spaces - beyond their physical dimension - are social and symbolic configurations that model ways of learning, living, and coexisting.

One of the main contributions of the literature reviewed is recognizing the territory as a pedagogical agent, overcoming the idea of the school as a closed and homogeneous space. From pedagogies of place to urban approaches that understand the city as a 'macro-school,' an expansion of educational horizons towards a more relational, situated, and contextual understanding of learning is proposed. This spatial shift in education allows for valorizing local knowledge, collective memories, and community practices historically marginalized by modern schooling.

Recent studies also show that architectural and urban design can be a powerful tool for fostering creativity, a sense of belonging, and collaboration, especially when developed through collaborative and culturally sensitive methodologies. In contrast, specific spatial models can reproduce inequalities and exclusions, reinforcing institutional hierarchies and denying the diversity of bodies, times, and knowledge that inhabit education.

However, the review has also identified relevant gaps that urgently need to be addressed. These include the limited presence of Global South studies, the limited articulation between disciplines (particularly architecture and pedagogy), and the need to incorporate more strongly critical frameworks such as intersectional feminism, spatial justice, and decolonial approaches. Furthermore, a gap persists between theoretical proposals for participation and their practical implementation in real educational contexts.

In this sense, a research and action agenda that promotes spatial practices committed to territorial equity, sustainability, and educational justice is needed. A truly transformative learning architecture cannot be limited to formal or technological innovations; it must start from a deep recognition of the communities that inhabit the spaces, their memories, struggles, and aspirations.

Finally, this article seeks to contribute to the dialogue between architects, urban planners, educators, and social scientists around a common and urgent question: how to design spaces that teach, care, include, and liberate?

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CONFLICT OF INTEREST

The author declares that there is no conflict of interest.

AUTHORSHIP CONTRIBUTION

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