

ASSESSING ARCHITECTURAL APPROPRIATION THROUGH THE CLQH27 PARTICIPATORY DESIGN-BUILD WORKSHOP

ENRIQUE VILLACIS¹, VALERIA ARIAS¹ and CYNTHIA AYARZA²

¹*Facultad de Hábitat, Infraestructura y Creatividad PUCE, Quito, Ecuador*

²*Ensusitio, Quito, Ecuador*

Architectural appropriation offers a way to examine how the quality, use, and meaning of built environments can influence the perception of socioeconomic disparity. This paper is important because it applies an existing Guideline Matrix for Architectural Appropriation to a real built case study, using the matrix not as a design proposal but as an evaluation filter for an architectural intervention developed in a context of social vulnerability. The study analyzes the Nido de Retazos project at the Jardín del Edén Child Protection Residential Center through three dimensions of the matrix: Landscape, Social Appropriation, and Materiality. The case is examined using project documentation, direct observation, and qualitative evidence from semi-structured interviews with fifteen participating architecture students. The assessment identifies how place identity, inclusive and adaptable use, collective construction, and material decisions contribute to belonging, spatial dignity, and the appropriation of the built environment. The findings indicate that the project can contribute to reducing perceptions of socioeconomic disparity by providing a spatial response whose quality is not determined by the users' vulnerable social condition. The study also shows the value of applying the matrix to academic design-build cases as a systematic way of relating architectural qualities to social outcomes.

Keywords: Henri Lefebvre, Architecture, Economic disparity, Jardin del Edén.

1 INTRODUCTION: ECONOMIC DISPARITY-ARCHITECTURAL APPROPRIATION

Contemporary architecture often reflects and reinforces socioeconomic disparities by producing spaces that exclude vulnerable communities from environments with high spatial quality (Ciaramelli 2023). In response to this challenge, participatory and community-based architectural practices have emerged as alternatives capable of reducing these inequalities by directly involving users in the design and construction process.

This paper aims to apply the Guideline Matrix for Architectural Appropriation (Villacís *et al.* 2026). To a specific case study to evaluate its effectiveness as a framework for assessing how participatory architectural interventions contribute to reducing the perception of socioeconomic disparity. The Con Lo Que Hay 27 (CLQH27) academic workshop, in which fifteen fourth-year architecture students from the Pontifical Catholic University of Ecuador collaborated with the Jardín del Edén Child Protection Residential Center to design and build a recreational space for children living in conditions of social vulnerability. Beyond evaluating the architectural outcome, this research examines how the collaborative design-build process influences participants' understanding of architecture as a social practice. Through the application of the appropriation matrix and the analysis of the perceptions of the participating students, the study seeks to identify

the architectural and participatory qualities. It demonstrates how academic design-build workshops can become effective pedagogical and social tools for reducing perceptions of socioeconomic disparity.

Socioeconomic disparity is critically manifested within the contemporary urban environment, where the city-model as argued by the philosopher of law Fabio Ciaramelli (2023) intrinsically coexists with inequality, environmental aggression, and the denial of difference, despite maintaining its historical power of attraction for populations. In his critique of the globalized neoliberal city, Ciaramelli (2023) highlights how current urban development prioritizes a mercantile logic that widens social gaps and using the habitat of the most vulnerable sectors. In response to this scenario of segregation, architectural appropriation emerges as a fundamental mechanism for resistance and transformation; a process through which citizens become active agents who subvert exclusionary design.

2 METHODOLOGY

The methodology consists of applying the previously developed Guideline Matrix for Architectural Appropriation to the selected case study. The matrix is grounded in Henri Lefebvre's theory (1974) of the social production of space and organizes architectural appropriation into three dimensions: Landscape, Social Appropriation, and Materiality. These dimensions are interpreted through the contributions of Bruno Taut (1919) and Christian Norberg-Schulz (1980), Yi-Fu Tuan (1977), and Peter Zumthor (1988), respectively. Because the matrix was established in previous research, the present study does not propose or revalidate it; instead, it uses the matrix as an analytical filter for a completed architectural project.

The application was conducted by the research team through four sequential steps. First, the matrix and its evaluative questions were reviewed to establish the criteria used in the assessment. Second, the case study was documented and examined in relation to its social context, users, design process, construction process, and final spatial configuration. Third, the case was analyzed through the matrix, relating the architectural evidence to the criteria of Landscape, Social Appropriation, and Materiality. Fourth, the findings were interpreted in relation to the research question concerning the perception of socioeconomic disparity.

The assessment used qualitative triangulation. Evidence was drawn from project documentation, direct observation of the design and construction process, and semi-structured interviews with the fifteen participating architecture students and shelter representative. The evidence was organized according to the criteria in the matrix so that interpretations of the architectural intervention could be compared with participants' accounts. This procedure does not establish a causal measurement of socioeconomic disparity; rather, it identifies architectural and participatory conditions that are relevant to its perception.

3 GUIDELINE TO ASSERT ARCHITECTURAL APPROPRIATION OF SPACES IN ARCHITECTURAL PROJECTS THROUGH HENRY LEFEBVRE'S THEORY OF SOCIAL SPACE

Lefebvre's theory of social space, present in his book "The Production of Space", examines how spaces are created, used and experienced by people and how spaces, in turn, shape social interactions that construct everyday lives and identities of their users (Lefebvre 1974). This perspective asserts that constructed spaces are not static; rather they are continuously appropriated and reinterpreted by their inhabitants (Lefebvre 1974). The theoretical framework draws three dimensions. Landscape, articulated by Yi-Fu Tuan (1977), highlights the integration of natural and built environments to dignify habitability and counter marginalization through the

“spirit of place”. Taut’s (1919) and Norberg-Schulz’s (1980) notion of social appropriation explains how everyday practices and spatial adaptability transform abstract spaces into territories of identity, fostering inclusion and belonging (Taut’s 1919). Peter Zumthor’s phenomenological view of materiality shows how construction materials, beyond their structural role, evoke sensory and poetic responses that confer symbolic and physical dignity to inhabited spaces (Zumthor 1988).

Based on the aspects explored by these four authors in terms of space appropriation’s key aspects, the following guideline was developed to assess architecture projects as per Villacís *et al.* (2026) (Table 1).

Table 1. Guidelines to architectural appropriation of spaces in architectural projects.
Source: Adapted from Villacís *et al.* (2026).

Guideline for Architectural Appropriation of Spaces		
Aspects for appropriation	Key point	Evaluative Questions
Landscape Yi-Fu Tuan (1977)	Identity Through Landscape. Character and "spirit of place (genius loci)": how landscape elements define a place’s identity and allow people to emotionally connect with it	• How do the <i>landscape elements</i> define the <i>identity of the place</i>? • How does the project <i>respect and enhance</i> this identity? • How does this <i>identity emotionally connect</i> through landscape features such as: <i>topography, climate and vegetation</i>?
	History And Collective Memory. landscape elements that <i>evoke history and collective memory</i> enable people to <i>identify with and relate to the built environment</i>	• What landscape elements that <i>evoke the history and collective memory</i> are integrated in the project? • How are these elements incorporated to <i>help people identify</i> with the project and with the natural environment? • How does the project <i>balance the preservation</i> of historical elements contemporary use, ensuring that the <i>landscape remains relevant and meaningful</i>?
	Kinesthesia. Sensorial and phenomenological experience: how landscape elements contribute to environments <i>experienced through all the senses</i>	• Which landscape elements create <i>kinesthetic experiences</i> and how do they do so?
Social appropriation Bruno Taut (1919) and Christian Norberg-Schulz (1980)	Place Cultural Identity. Symbolism of place: how spatial physical characteristics and cultural history intertwine to <i>shape identity</i> and sense of belonging	• How does the project reflect and engage with <i>the local culture</i>?
	Being Inclusive. Social dynamics: how social and cultural identity is constructed through interactions and power relations within shared spaces	• Which <i>social dynamics</i> does the project enhance to help <i>create a shared social and cultural identity</i>? • How are these dynamics enforced? • How does the project <i>reflect the social structure</i> of the community while <i>ensuring inclusivity and collective well-being</i>?
	Routinary Usage. Space perception: how individuals’ perception of physical space influence <i>daily activities and social interactions</i>	• How does the project impact people’s <i>daily activities and social interactions</i>?
	Adaptation & Appropriation. Use of space: how people <i>adapt</i> their environment to <i>meet social, economic, and cultural needs</i> .	• Does the project allow people to <i>adapt and use</i> space flexibly <i>over time</i>? • In what ways does the project <i>support the social, economic, or cultural activities</i> of the community?

Table 1 (contd).

Social Approp. (contd)	Aesthetics. Design-planning: <i>how aesthetics and functional qualities are accessible, respectful, and meaningful to local users.</i>	• How is the project's aesthetic respectful of and approachable to the local values and sensibilities ?
Materiality Peter Zumthor (1988)	Contextual Integration. Choosing materials <i>harmonize both physically and symbolically with the natural and cultural environment</i>	• How do the materials harmonize with the natural environment ? • What meaningful connections do these materials foster with the local community?
	Functional Purposes. Significant materiality: materials serve <i>functional purposes</i> while conveying <i>meaning</i>	• How do the selected materials fulfill functional requirements within the project? • In what ways are these materials meaningful ?
	Traditional & Contemporary Methods. Sensitive construction: material selection considers traditional and contemporary construction techniques.	• How does the technical approach address both traditional and contemporary construction methods ?
	Appropriation Through the Construction Process. Constructive appropriation: <i>how materials are manipulated and assembled affects emotional and physical appropriation of space.</i>	• How did the construction process contribute emotional and physical appropriation to the community?

4 CASE STUDY: CON LO QUE HAY 27 (CLQH27) (WITH WHAT IS AVAILABLE)

The CLQH workshop (With What is Available) is an academic initiative of a private architectural practice. This four-month course promotes participatory design, and community building approach centered on real-life construction experiences (Ensusio 2026). This case is relevant for the study for three reasons. First, it represents an academic context in which future architects can learn and practice socially responsible design and construction. Second, it involves a community whose users are children living in a socially vulnerable context, making questions of spatial dignity and access to quality environments particularly relevant. Third, the project combines collaborative design, material reuse, and community-based construction, allowing the matrix to be applied to both the final architectural outcome and the processes through which the space was produced.

The 27th edition of the workshop (CLQH 27) carried out by fourth-year students from the School of Architecture, Design and Arts at the Pontifical Catholic University of Ecuador (FHIC-PUCE). In cooperation with the Jardín del Edén Child Protection Residential Center, the workshop designed and built a versatile ludo-space named Nido de Retazos (Scraps Nest). Located at the second floor of the resource room. The project is designed to provide shelter, rest, and active calmness for the children and shelter leaders. You access the second floor through a climbing staircase landing in a semi-open area with floor graphics. Inside, the design features an interactive area with movable pieces for younger children and a flexible main block adaptable to daily needs, bordered by railings that double as planters. Built in a rigorous four-day collaborative phase, the structure utilizes disused local lumber and a community-provided steel framework.

5 RESULTS: ASSESSMENT OF CLQH27 WORKSHOP

5.1 Assessment of Landscape

Place identity through landscape: primarily use is as a space for rest and contemplation for children and leaders of the shelter, the project's elevated location and orthogonal volumetry acts as a clean architectural frame that encloses the surrounding environment. **History and collective memory:** It provides a space for rest around the mountains that surround the site. The design

incorporates a dynamic game through movable elements that interact directly with the physical environment. In this manner, children can manipulate the structure and actively relate this visual to the territory, reinforcing the collective memory of the site. **Kinesthesia:** Through a three-sided structure, each facade is intentionally oriented toward a significant element of the territory to generate a direct visual impact. The sensory experience is enhanced by gardeners with local vegetation that contribute to scents and textures, while the use of timber and the architectural envelope generate a dynamic play of light, shadow, and thermal contrasts.

5.2 Assessment of Social Appropriation

Place cultural identity: The project is designed as a space for rest and active calmness that promotes coexistence and integration, responding directly to the daily dynamics of the shelter. The social dynamics during the four-day construction phase fostered a deep sense of shared identity, despite initial challenges in group coordination. One participant highlighted: ‘Working among several people was a bit complicated because everyone has their own habits... the hardest part for me was trying to coordinate people for the different activities... but this trip helped me see how the group really was’ (Ensusitio Arq. 2026). This reflects how the shared construction process served as a medium for social integration and collective problem-solving. **Being inclusive:** The architecture promotes inclusivity through an open, multifunctional layout that avoids segregating enclosures. Although access is limited to children and shelter leaders, the facility excludes children with physical disabilities, defining a specific operational scope. **Routinary usage:** The structure acts as an anti-routine sanctuary rather than dictating or reinforcing a rigid daily schedule. Its spatial versatility empowers children to break away from their standard school and shelter obligations, freely exploring recreational, creative, and spontaneous activities that deliberately deviate from their daily routines. **Adaptation and appropriation:** The project architecturally reclaims a second floor that was previously obsolete and out of use. Its open and adaptable design addresses the shelter’s needs for storing belongings, relaxation, and the diversification of future activities. The sense of spatial appropriation is evident not only in the final structure but in the transformation of the participants’ perception of real-scale building. As a student expressed: ‘What I liked the most was the experience of building something in real life... I am very grateful because I learned to use many tools, to work in a team, and above all to see something you designed in real life’ (Ensusitio Arq. 2026). **Aesthetics:** The orthogonal geometry of the structure provides order, balance, and spatial clarity. The visible use of reused timber reduces the environmental impact on the surroundings, keeping the landscape virtually undisturbed.

5.3 Assessment of Materiality

Contextual integration: Reused timber was chosen as construction materials to be coherent with the environment. Beyond ecological harmony, the selection of these materials serves an educational purpose, teaching the children the value and potential of reusing resources to give them a second life. **Functional purposes:** All chosen materials fulfill both structural and symbolic use. The structure is composed of glued-laminated timber beams assembled through the interlocking of their elements, which configure the facade and the protective handrails. **Traditional & contemporary construction methods and appropriation construction process:** The project balances both methods by combining organic timber with modern metal components and connections. This hands-on experimentation fostered a strong sense of identity and ownership among the shelter members. Constructive appropriation was continuously negotiated on-site through resource availability and functional needs. For instance, color was introduced

adaptively when anticorrosive paint was required for bolts, columns, and steel bars, choosing playful primary colors that suited the shelter's environment. Furthermore, the shelter leaders expressed that the outcome was 'a very good, very rewarding experience' when seeing the completed work (Ensusitio Arq. 2026). **Sensorial quality of materials:** The proposal respects the natural textures of the timber and leverages the arrangement of its elements to project changing patterns of light and shadow that enrich the spatial experience. **Durability:** As a construction utilizing organic materials, its durability is directly tied to the proper management of its upkeep. To ensure long-term preservation, the timber features a chemical treatment and a removable plastic roof for weather protection.

6 CONCLUSIONS

The assessment of the 'Nido de Retazos' project under the filter of spatial appropriation demonstrates that community and participatory architecture can act as resistance against the market-driven urban dynamics described by Fabio Ciaramelli (2023). By transforming an abandoned and obsolete concrete slab into a free, organized, rich and recreational space, the project tangibly restored spatial dignity to the children of the shelter. The initial material disparity was mitigated by a design of high aesthetic and sensory standards, refuting the notion that social architecture must be precarious. The methodological matrix based on Lefebvre (1974) showed that effective appropriation is not an accidental phenomenon, but the direct result of sensitive design decisions.

Students consistently identified the collaborative design-build process as one of the most significant learning experiences of the workshop, emphasizing that direct engagement with a vulnerable community expanded their understanding of architecture as a social practice rather than solely a technical discipline. These perceptions support the idea that spatial appropriation is generated not only by the built outcome but also through the collective process of designing and constructing with the community.

Although this research is limited to a single case study, the findings suggest that the proposed matrix offers a practical and transferable tool for assessing participatory architectural projects.

References

- Ciaramelli, F., *La Ciudad de los Excluidos: La Invivable Vida Urbana en la Globalización Neoliberal*, Capella, J. R., and Vassallo, V. M. (trans.), Editorial Trotta, 2023 [in Spanish].
- Ensusitio, *Con Lo Que Hay*, 2026. Retrieved from <https://ensusitioarq.com/con-lo-que-hay.html> on May 1, 2026.
- Ensusitio Arq., *NIDO DE RETAZOS-Con Lo Que Hay 27, FHIC-PUCE*, Video, January 25, 2026 [in Spanish]. Retrieved from <https://www.youtube.com/watch?v=QiW3nCqzhc4> on May 1, 2026.
- Lefebvre, H., *La Production de l'Espace*, Editions Anthropos, Paris, 1974 [in French].
- Norberg-Schulz, C., *Genius Loci: Towards a Phenomenology of Architecture*, Rizzoli International Publications, New York, 1980.
- Taut, B., *Alpine Architektur*, Folkwang Verlag Publishing, Hagen, Germany, 1919. [in German].
- Tuan, Y.-F., *Space and Place: The Perspective of Experience*, University of Minnesota Press, Minneapolis, 1977.
- Villacís, E., Herrera, D., Ayarza, C., Pavón, M., García, C., and Rivas, M., *Guidelines for Assessing Architectural Appropriation in Redefining Perceptions of Economic Disparity*, Proceedings of the Second Latin American Structural Engineering and Construction Conference 2026 (LATAM SEC 2026), ISEC Press, 13(1), AAE-03, Ecuador, Quito, March 23-27, 2026.
- Zumthor, P., *Thinking Architecture*, Lars Müller Publishers, Baden, 1998.