

REDEFINING UNSEEN SPACES: EXPERIMENTAL AND INNOVATIVE METHODS FOR RESEARCHING URBAN VOIDS

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Abstract

Urban voids—often termed "white spaces"—represent overlooked territories within cities, holding untapped potential for spatial regeneration and social engagement. This study presents an innovative pedagogical framework developed at the Institute of Landscape Architecture (Slovak University of Agriculture in Nitra), where research on urban voids is integrated into landscape architecture education through studio projects, fieldwork, and student theses. By combining historical analysis, sensory mapping, and experimental cartography, the research employs a six-stage methodology to decode the latent dynamics of these spaces. Case studies from Bratislava, Nitra, Trnava, and Žilina demonstrate how student-led mapping techniques—such as pixel grids (Fig. 1), annotated sketches (Fig. 3), and participatory field surveys (Fig. 2)—reveal patterns of neglect and opportunity in urban voids. The results highlight two key insights: (1) creative-analytical hybrid methods (e.g., collages, sensory diagrams) uncover invisible socio-spatial narratives, and (2) small-scale interventions, tested in academic settings, can serve as prototypes for broader urban reactivation strategies. While the study underscores the value of embedding void research into design pedagogy, it also identifies challenges, including the scalability of student projects and the need for community co-design in real-world applications. This work advances a replicable model for interpreting urban voids, arguing that their transformation begins with seeing them not as empty gaps, but as spaces of pedagogical and civic possibility.

Key words: white spaces, neglected spaces, urban voids, recreation, urban tourism

Introduction and theory

Urban environments are in constant flux—morphing through layers of expansion, contraction, and transformation. Within this ongoing evolution, a specific type of space emerges: underutilized, undefined, often unnoticed by the mainstream urban gaze. These are the urban voids—so-called white spaces—territories caught in between use and disuse, memory and oblivion, past planning and present neglect. Once dismissed as spatial leftovers, these areas are now gaining recognition for their latent potential to support innovative design, cultural revitalization, and inclusive urban regeneration. Urban voids can be defined as spatial gaps within the fabric of the city—ambiguous and unresolved in form, yet layered with meaning and possibility. As Klodnerová (2015) suggests, they may appear full or empty, physical or symbolic. Their true value lies in how they reflect the socio-political consequences of non-conceptual decisions over time—often acting as silent archives of past planning failures or cultural displacements. These spaces challenge conventional methods of analysis, demanding more sensitive, imaginative, and context-aware approaches.

Since 2021, the Institute of Landscape Architecture at the Slovak University of Agriculture in Nitra has conducted experimental research into these neglected areas, combining academic inquiry with hands-on student projects. By embedding this investigation into the curriculum—through studio assignments, workshops, and diploma theses—a new pedagogical model has emerged. This model connects spatial analysis, historical research, and field-based observation, empowering students and researchers alike to discover and reinterpret hidden urban territories (Čibík, 2024). A key part of this work involves recognizing that urban voids are not passive relics of the past, but dynamic spaces of opportunity. As Čibík and Jankechová (2023) argue, even small-scale invasive interventions—such as temporary structures or symbolic installations—can trigger the reactivation of forgotten urban fragments. These micro-actions have the capacity to reveal invisible structures of meaning, spark civic curiosity, and set the stage for longer-term regeneration efforts. In many cases, these voids have become increasingly relevant due to contemporary urban dynamics. With the retreat of mass suburbanization and the rise of intensive inner-city development, centrally located voids have become rare, even strategically desirable. What was once viewed as "leftover" or marginal now holds the potential to redefine urban compactness, density, and identity (Čibík et al., 2023). These shifts invite

us to rethink how we perceive and utilize emptiness—not as absence, but as presence waiting to be activated.

This article presents a methodological and experimental framework for analysing urban voids, drawing from case studies in Slovak cities such as Bratislava, Nitra, Trnava, and Žilina. The approach combines mental mapping, visual surveys, participatory design, and experimental cartography to uncover patterns of use, perception, and potential. As described in the study *Reserve Spaces in the (post)War Period* by Čibík (2024), these white spaces are deeply embedded in the urban mental landscape—charged with collective memory, trauma, and resistance, yet rarely addressed by formal planning. By combining research, teaching, and experimentation, this study offers new ways of understanding the urban void—not just as a physical entity, but as a social, emotional, and political phenomenon. It proposes that in order to create meaningful, adaptive, and inclusive urban spaces, we must first learn to see what has long remained unseen.

Methods: A Chronological Framework for Mapping Urban Voids

The following chapter presents a chronological overview of innovative methods and analytical approaches employed in the identification and exploration of "white spaces" within compact urban structures, as interpreted and implemented by students of landscape architecture. These student-led investigations form a crucial component of experimental research in urban design, offering fresh perspectives on spaces that are often overlooked, undervalued, or misused within the city fabric.

Drawing from interdisciplinary studio work and site-specific assignments, this chapter documents a series of mapping exercises, sensory mappings, and visual notations that aim to expose the latent potential of neglected urban areas. Through direct interaction with the environment—via observation, sketching, conceptual interpretation, and sensory analysis—students are encouraged not only to read the space as it is but to uncover how it could be.

The research methodology adopted in this study follows a chronological sequence, reflecting the temporal and developmental logic of the design-research process. Each step is essential for building a comprehensive understanding of neglected or undefined spaces. These stages form the backbone of analytical and design interventions and provide a replicable framework for exploring similar urban phenomena:

1. Definition of the Study Area
2. Zoning and Preparation of Cartographic Base Maps
3. Field Research – Mapping White Spaces
4. Development of a Working Database of White Spaces
5. Historical Research of White Spaces
6. In-Situ Analysis

Definition of the Study Area

The initial phase involves selecting and clearly delineating the area of interest within the urban structure. This step requires identifying spatial boundaries based on zone typology, accessibility, visibility, current use, or lack thereof. The chosen site typically exhibits characteristics of neglect, underutilization, or detachment from its urban context.

Zoning and Preparation of Cartographic Base Maps

The area is then subdivided into functional or experiential zones, supporting a layered reading of spatial patterns and land use. Simultaneously, relevant base maps (topographic, cadastral, orthophotos) are prepared as foundational tools for further analysis.

Field Research – Mapping White Spaces

On-site research activities are carried out to observe, document, and interpret spatial voids. This phase often includes walking surveys, photographic documentation, sensory mapping, and sketching. The goal is to collect qualitative and quantitative data that capture both visible and invisible attributes of space.

Development of a Working Database of White Spaces

Data collected in the field are systematized into a working database that categorizes white spaces based on size, scenario, ownership, origin, current function and other defining characteristics. This database serves as a critical tool for comparative analysis and future planning proposals.

Historical Research of White Spaces

A historical review is conducted to trace the evolution of the site, uncovering reasons for its current state. This includes the analysis of old maps, archival imagery, planning documents, and oral histories to understand former functions, ownership patterns, socio-political influences and urban planning errors that may have contributed to its marginalization.

In-Situ Analysis

The final phase involves a deeper, interpretive analysis conducted directly on site. This may include participatory observation, temporary installations, spatial experiments, or interactive mapping workshops with local residents. The aim is to generate an embodied understanding of place and test early-stage design hypotheses grounded in real-world conditions based on modern urban planning strategies such as performative urbanism or tactical urbanism.

Results

The following chapter will interpret some student outputs. These visual and analytical materials—created as part of academic studio work and research assignments—serve not only as illustrative case studies but also as experimental tools for exploring the character and transformation potential of urban voids.



Fig. 1: Pixel grid method of mapping white spaces. Source: Šurinová, 2023.



Fig. 2: Field Research – Mapping White Spaces. Source: Kovalovská, Zigová, 2024.

Through sketches (Fig. 3), mappings (Fig. 1, Fig. 2), annotated photographs, sensory diagrams, and interpretative collages, students have translated abstract ideas into tangible expressions of space. Each phase of the methodology is reflected in a distinct set of outputs, capturing the layered complexity of the observed environments. The catalogue highlights the diversity of approaches and the evolving depth of insight as students move through the research process. It also reveals the value of combining artistic intuition with analytical rigor—a hallmark of landscape architectural education at the Institute of Landscape Architecture, where creativity becomes a medium for reimagining the invisible layers of the city.



Fig. 3: Mapping of perceived urban white spaces. Source: Kremnická, Pilarčík, Tokár, 2024.

Conclusion

The article presented a structured methodological approach to identifying and analysing urban voids through the lens of landscape architecture education. The emphasis was placed not on the physical transformation of these spaces, but on the process of reading and interpreting them as part of an academic and exploratory framework. By following a clearly defined sequence—from territorial delimitation and zoning to field mapping and in-situ analysis—students were able to engage with these overlooked areas through both analytical tools and creative expression. A selection of student outputs served as examples to illustrate key phases of the process, rather than to evaluate the white spaces in their entirety.

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Souhrn

Předložená práce představuje metodický rámec pro analýzu městských bílých míst z pohledu studentů krajinářské architektury. Těžištěm textu je chronologicky uspořádaný popis jednotlivých fází

mapování – od vymezení území až po in-situ analýzy. Cílem nebylo plošně zhodnotit samotná území, ale spíše demonstrovat proces zkoumání jejich identity a potenciálu. Vybrané studentské výstupy slouží jako ilustrace k jednotlivým fázím a ukazují různé způsoby, jak lze k tématu bílých míst přistupovat z hlediska krajinářské analýzy a vizuální interpretace.

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