

New frame – same picture. Spatial concepts explored and revealed by first-year architecture students

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Abstract

The transition from high-school to university is often a challenging and unsettling experience. In order to ease the transition to a new environment, the first steps of students at the Faculty of Architecture in Iași are closely guided by tutors. The first task of the Project Design course confronts the students with a new challenge: that of observing and interpreting the spaces they visit, aiming to develop the skills of direct analysis of the built environment. The paper aims to analyze the processes involved in the consolidation of the basic notions and principles of architecture in the case of first-year students, through guided observation, diagrammatic representation, and comparative analysis. The aim is to identify spatial categories relevant to understanding the principles of architectural composition. The spatial models and concepts identified within the city of Iași address fundamental compositional principles with broad applicability, regardless of the specific urban/architectural context in which they are explored.

Keywords: city exploration, space perception, architectural principles

Introduction

First-year students experience significant personal, academic, and social changes. Academically, they shift from structured high school learning to independent study, teamwork, and close tutor interaction. Socially, many face new environments and relationships, making the early transition—especially the first six weeks—crucial.

Luigi Snozzi contended that architectural education ought to originate from an understanding of the city as a whole, rather than from isolated, small-scale projects. He preferred assigning students an area of the city to analyze and design, believing that by the end of the year they would develop a genuine love for the built environment (Snozzi, 2013).

Literature Review

Gale and Parker (2014) identify three types of higher education transitions. **Induction transition** is a structured, chronological adjustment period involving cultural adaptation. Institutions can support this with coherent strategies like introductory weeks, helping students engage with academic practices and social life. **Developmental transition** involves personal growth and identity change, such as moving from adolescence to adulthood. Institutional support and curriculum adaptation are vital, especially for students from vulnerable backgrounds who may struggle to adapt. **Transition as becoming** is a lifelong, personal experience. It calls for flexible learning paths and recognition of prior knowledge. Inclusive curricula should reflect diverse learning styles and student identities, while teaching should be culturally sensitive and relevant.

Creating a sense of belonging is key. High-quality, informal interactions with staff and peers can offset feelings of isolation (Maher & Macallister, 2013). Student attrition is often caused by unclear goals, low readiness, skill gaps, and the feeling of being excluded. For architecture students, mismatched expectations further complicate transitions (Anay & Özten, 2020). Studies suggest that student engagement, constructive feedback, and institutional support are

critical in reducing school dropout rates. Preventing student attrition necessitates a multifaceted approach, encompassing early engagement initiatives, systematic monitoring of student satisfaction and proactive intervention strategies.

The vocational field of architecture involves adhering to a series of values and shared interests and affinities that are achieved through multiple discussions, either in small groups or one-on-one.

For the students at the Faculty of Architecture of Technical University of Iași, understanding and assimilating the new space in which they will spend their activity in the coming years overlaps with a change in the way they perceive the surrounding environment. Thus, the transition is made from a superficial visualization of this environment to a critical way of perceiving and analyzing space, architectural objects, urban context, and the connection to their users.

Observation and interpretation—**analytical, logical, and critical**— are essential skills architects must continually hone. Architecture must be approached as a lived and experienced space. The city, in this context, becomes a key educational tool for understanding scale, composition, spatial relationships, and the unique character of place.

Previous studies on the role of field trips in architectural education emphasize observation, community engagement, and the development of critical spatial awareness (Borucka, 2019). Most contributions highlight the pedagogical value of in-situ learning but tend to remain generic, focusing on the experiential act of being in the city rather than on how specific urban morphologies shape perception. Quadir et. Kamal, 2022, highlight city walkabouts as a vital tool in architecture pedagogy, enabling students to develop visual literacy, cultural awareness, and experiential understanding of built form. Drawing on case studies from four institutions, the authors show how activities such as sketching, photographing, and documenting during study tours strengthen students' grasp of scale, proportion, style, and context. They argue that even local trips are valuable for first-year students, as they bridge theoretical learning with direct

spatial experience, and recommend integrating travel more deliberately into curricula rather than treating it as supplementary.

Case studies describe city walks in relatively homogeneous urban contexts, where architectural analysis primarily addresses building typologies, façade composition, or the relationship between interior and exterior space). What remains underexplored is how distinctive topographic and stylistic conditions can enhance students' understanding of spatial perception, scale, and long-range urban relationships.

The case of Iași provides a unique context that addresses this gap. The city's relief—its hills, plateaus, and the Bahlui plain—enables dynamic perception, with long perspectives towards distant landmarks such as Cetățuia and Galata monasteries or the Palace of Culture, perceived from Carol Boulevard. Equally, the city offers a dense "atlas" of architectural styles: from oriental decorative influences (Three Hierarchs, St. George, St. Theodores, Golia), Byzantine-Turkish volumetric conformations (St. Sava), and Western imports—Neoclassicism (Basota House, Balș House), French Academicism (National Theatre, City Hall, Central Library), to Art Nouveau and Neo-Romanian interventions, socialist functionalism (Luceafărul Theatre, Moldova Hotel, Unirea Hotel, Students' Cultural Center, Faculty of Architecture), and contemporary works. This exceptional diversity, combined with the abundance of green spaces that frame and reveal monuments, makes Iași a living history book of architecture. Our field trip exercise thus extends prior approaches by showing how guided observation in such a stratified and topographically articulated city enriches students' capacity to perceive spatial relationships, identify stylistic layers, and engage with urban context as a dynamic, multi-scalar experience.

Methodology

The first task of the Project Design course aims to develop students' skills in analyzing the built environment, with emphasis on its

relationship to the exterior, volumetric expression, and spatial qualities. It supports the consolidation of basic architectural principles through the dynamic process of **observation - understanding - representation.**

The exercise begins with guided tours, encouraging students to explore and interpret architectural spaces of various scales and configurations, while introducing key compositional principles. Moreover, this exercise aims to open one's eye to architecture, so that the students learn to perceive the lived space, to observe its qualities and defects, and to discover its potential, beyond the inconveniences due to improper use or the passage of time. The guided tours provide an opportunity to discover not only the city but also fellow students and professors. This unconventional moment can facilitate both a smoother induction and developmental transition and a more gradual process of becoming an architect.

The teaching objectives emphasize the need to identify fundamental architectural compositional principles; to develop the ability to simultaneously manage aspects related to architectural volume—as the result of an analytical process—and space, as key instruments in defining that volume; to understand the spatial relationships between form, the dimensions of the volume, and context, including the relationship between interior and exterior space; and to identify and illustrate an existing compositional-spatial concept.

A visual analysis reveals elements that either distinguish or unify the building within its context. Aspects such as scale, style, façade rhythm, and materials are key to understanding a place's character.

The building's relationship to its urban context can be examined through visual connections, circulation patterns, orientation, and transitions between public and enclosed spaces. Interior, exterior, and intermediate spaces function interdependently within the built and natural environment.

The relationship between interior and exterior space can be explored by examining the functional transitions in access zones, highlighting the compositional principles and tools used to define

entry points, their degree of transparency, and the quality of associated urban space. The connection between interior and exterior space can also be explored from the perspective of visual relationships made possible by the volumetric arrangement and the permeability of the façade.

Volume – This exercise cultivates the analytical skills necessary to deconstruct architectural objects into fundamental geometric forms, maintaining their proportions and highlighting essential compositional elements. It also involves interpreting visual language aspects such as dominance, rhythm, symmetry, contrast, transparency, and materiality.

The interior space – The study focuses on how elements like scale, circulation, openness, light, surfaces, and visual accents shape spatial atmosphere. Emphasis is placed on the human–space relationship as central to architectural experience.

In Phase 1, students selected six architectural or urban examples for comparative analysis using annotated photographs, highlighting aspects like entry, symmetry, rhythm, and materiality. In Phase 2, each student created a 50x70 cm board illustrating key diagrams focused on exterior relationship, volume, and interior space. The only requirement: approx. 50% of the board must feature diagrams drawn over photographs; technique was the student's choice, as an important secondary goal was to find the best graphical communication means to express their ideas.

Results

Every student selected and analyzed buildings and specific aspects of them, each filtering their observations through their own experiences and interests. As a result, when addressing integration into context, their choices proved highly diverse—ranging from examining how buildings are inserted into intersections, to capturing the contrasting character of urban spaces (Figs. 1 and 2).

A shared theme evident in these analyses is the recognition that the relationship between an architectural object and its urban context is

intrinsically linked to human presence, to eye - level perception, and to the atmosphere that the urban space is capable of generating.

Regarding the volumetric analysis, the focus was on synthesizing the selected architectural object into simple (primary) geometric forms while preserving the composition's proportions, as well as identifying compositional principles - such as symmetry, rhythm, contrast, dominance, and hierarchy - through diagrams and schematic representations (Figs. 3 and 4).

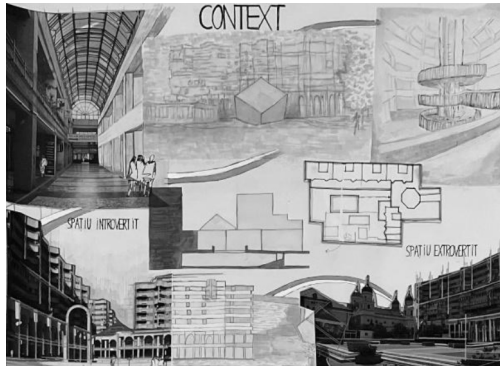


Fig. 1 Perception of corner buildings - arch. stud. Popa Mara Alexandra

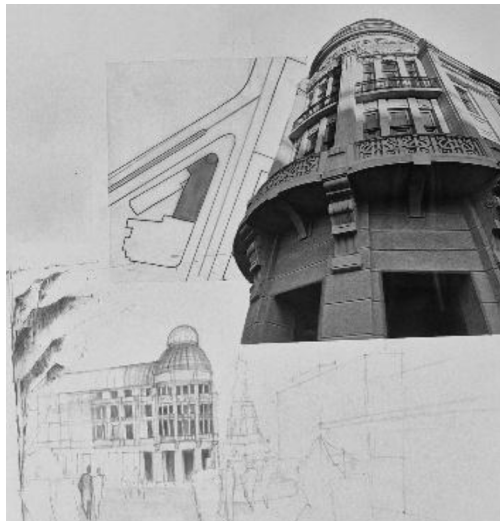


Fig. 2 Introvert / extrovert spaces - arch. stud. Bliorț Edith

Regarding the analysis of interior space, the focus was on capturing its qualities (through diagrams, sections) and the visual communication between spaces (Fig. 5). Additionally, the direct relationship between material, surface, and expressiveness was explored by analyzing the type(s) of material used and highlighting the connection between material/surface and space/volume. To all of this, we can naturally add a subjective quality as well: the atmosphere of the place (Fig. 6).

Fig.3 Symmetry and rhythm - arch. stud. Dămoc Matei

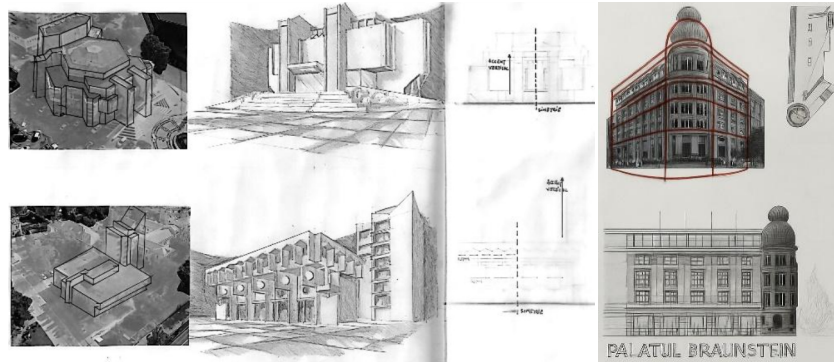


Fig. 4 Basic forms study - arch. stud. Costache Dana Cristiana

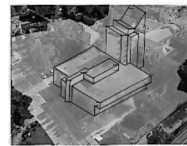
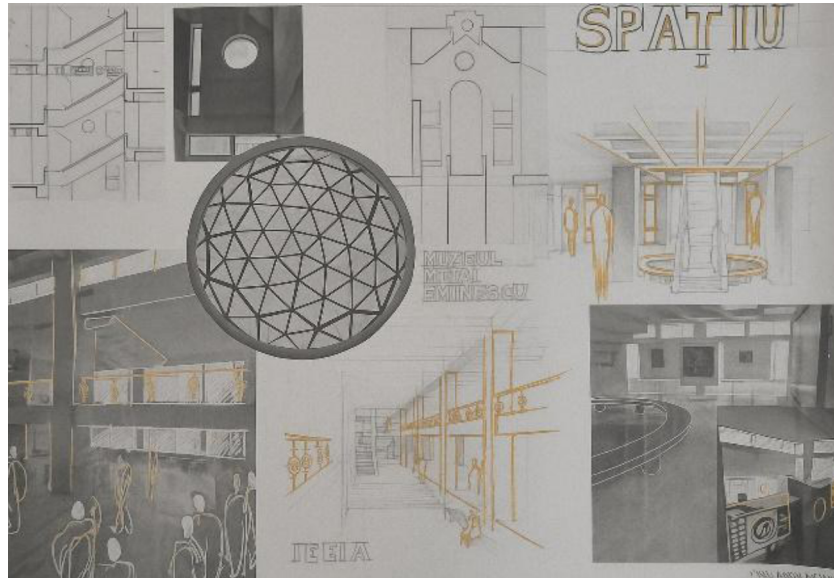


Fig. 5 Materiality and atmosphere - arch. stud. Popa Mara



On the submission day, all students present their projects, explaining the decisions made both with regard to the selection of the buildings or spaces under analysis and also in terms of the chosen analytical methods. This process offers multiple advantages: on the one hand, students are required to synthesize the information conveyed through their presentation boards; on the other hand, by attending their colleagues' presentations, they are exposed to alternative analytical approaches and to different ways of observing the same buildings or spaces. Concurrently, students receive feedback from their tutors, which they can integrate into future projects in order to enhance and refine their work.

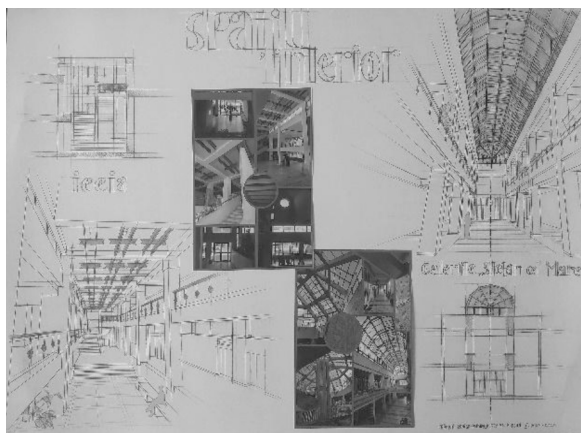


Fig. 6 Space proportions and connectivity – arch. stud. Crăciun Denisa Andreea

Discussion

An analysis of the student submissions reveals a series of criteria that guided the selection of architectural objects or urban areas for study. From the perspective of *contextual integration*, preference was given to buildings that: clearly articulate the entrance through volumetric emphasis; define the transition between exterior and interior with clarity, often through architectural elements such as porticoes; establish a continuous relationship between interior and exterior spaces through the use of glazed areas; incorporate well-defined enclosures, such as enclosed or semi-open courtyards and are

strategically located at urban intersections, enhancing their spatial and visual prominence.

In terms of *volumetric analysis* and abstraction into primary geometric forms, students gravitated toward buildings that: have a relatively simple volumetric composition, with a clearly recognizable vertical or horizontal dominance; are generated from basic geometric figures (e.g., squares or circles); present symmetrical or partially symmetrical layouts; display rhythm either volumetrically or on the façade level; employ the change of materials to underscore volumetric shifts and hierarchical organization.

Regarding *interior spatial analysis*, students sought out compositions that: ensure visual and spatial continuity through the use of open, vertically articulated floor plans; feature central, static, symmetrical spaces that anchor the spatial composition; exhibit deep, mono-axial spatial configurations that emphasize perspective and directionality; include vertical planes that serve both as spatial dividers and focal points, while maintaining a sense of continuity; highlight compositional elements through the use of different materials, textures, or colors; integrate light as a fundamental architectural element, capable of generating diverse spatial atmospheres and enhancing perceptual experience.

Conclusion

The analysis of student submissions reveals a deliberate and increasingly sophisticated engagement with fundamental architectural principles, particularly those pertaining to contextual responsiveness, volumetric articulation, and the qualitative dimensions of interior space. The selected case studies reflect a discernible preference for buildings with compositional clarity, legible spatial hierarchies, and a conscious dialogue with their urban surroundings. Students effectively abstracted complex forms, analyzed spatial transitions, and explored atmospheres shaped by light and enclosure—reflecting a foundational grasp of architecture as both experiential and analytical.

The compositional principles investigated by the students in the context of the city of Iași, with its complex and diverse conformation reflect fundamental design strategies with wide applicability, transcending the particularities of any given urban or architectural setting.

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Cadru nou – aceeași imagine. Concepte spațiale explorate și reprezentate de studenții din anul I de arhitectură

(rezumat)

Tranziția de la liceu la universitate este adesea o experiență provocatoare și destabilizatoare. Pentru a facilita adaptarea la un nou mediu, primii pași ai studenților de la Facultatea de Arhitectură din Iași sunt ghidați îndeaproape de tutori. Prima sarcină a cursului de Proiectare îi confruntă pe studenți cu o nouă provocare: aceea de a observa și interpreta spațiile pe care le vizitează, cu scopul de a dezvolta abilitățile de analiză directă a mediului construit. Lucrarea își propune să analizeze procesele implicate în consolidarea noțiunilor și principiilor de bază ale arhitecturii în cazul studenților din anul I, prin observație ghidată, reprezentare diagrame și analiză comparativă. Scopul este de a identifica categoriile spațiale relevante pentru înțelegerea principiilor compoziției arhitecturale. Modelele și conceptele spațiale identificate în orașul Iași abordează principii compoziționale fundamentale cu aplicabilitate largă, indiferent de contextul urban/arhitectural specific în care sunt explorate.