

Architectural Space: Where Do We Start? A Way of Thinking the First Approach of an Architectural Design Studio

Professor Dr. Ana Bordalo

Instituto Superior Manuel Teixeira Gomes – ISMAT, Portimão, Portugal
CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of
Architecture, Universidade de Lisboa

E-mail: ana.bordalo@ismat.pt

CHAPTER IV

The teaching of Architecture, as any other teachings, requires a perception of the present. Today's Architecture student has unlimited access to images and information up-to-the-minute from (almost) the entire world.

When we ask students -who sit for the first time in a Project Studio classroom- to start their first work, it is almost always necessary to start by “dismantling” the “preconceptions” of architecture that they have and teach them how to create “architectural space” that can be identified by itself (for its characteristics and sensations) and not by its materiality or function.

This process can start in different ways. The important aspect is that at the end of the first year of Architectural studies, students will be able to tease “emotions” in those who move through the Architectural space, thus managing the start of their journey to contribute to a more humanized territory.

This study presents an individual approach to the process of teaching Architecture and how this process could interfere and contribute to create an Architectural Mentality in students, and at the same time, contribute to the way they could be able to design the spaces based on the perception of the space.

Introduction

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1. A beginning for the creation of the Architectural Space – the construction of an Architectural Mentality and a Design Process

On the first day of the Architectural Design Studio I, I tell the students that there are at least three and a half fundamental rules for them to think as architects. At the same time, for them to be able to build their identity with an Architectural Mentality and develop an individual Design Process – two structural elements are required for them to become Architects; also, differentiate themselves in the way they understand the territory, the emptiness and the built spaces – knowing that architecture lives as much from the space that we built as well as from the ones that we leave empty (which allow us to relate to the built space!).

The first rule that the students must know is to learn to OBSERVE. Knowing how to observe and through observation, one builds a critical approach - understanding and knowing beyond what they are seeing

The second rule associates with the meaning of FEEL. Knowing how to feel and reflect on what they feel when they walk on the streets, or when they emerge in to the spaces – the sensations that the architectural space provoke in their minds and body are often what allow them to remember it and with that, build our “individual library” of meaningful images, that help them to create an identity (as well as persons as architects).

The third rule is, to CREATE. Create, starting from the critical reflection about what they build along their journey, their existence, and their reflections – a consequence of what they observe and what they feel.

The half-rule is to COMMUNICATE! It is essential to know how to communicate about what they create, their ideas, concepts and/or purposes - through the drawing, the design, the writing, the speaking or through the conjugation of all this fundamental communications channels!

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In addition to these three and a half (simple) rules, there are other characteristics that are also (very) important! The CURIOSITY is fundamental! The curiosity walking through the streets, to enter a building, to travel, to draw (endlessly) what they observe and feel, such as, for example, the way that the light works on the walls. As Campo Baeza mentioned: light is the first material in architecture! - An architecture student cannot just look at the screen of a computer, he needs to see the world with his own eyes, go there, and draw it! The place is the first element of a project, of a building and with that, it is the support of our work. Then, it's essential to add to the CURIOSITY the capacity to live, to think about what surrounds them, to ask when they don't understand, to know how to work in a team and be responsible for their decisions. Knowing that the processes are based on History, Theory and the Systems (architectural and constructive). The most of the tools become acquired throughout the life and throughout the professional practices - with constant changes and evolution of systems that involve the entire architectural process. Lifelong training is fundamental, as it allow us to create new perspectives and new knowledge.

2. From stretch to creation?

The construction of an idea of space - in a student's first contact with the blank paper - involves, most of the time, the transcription of the entire process of living with the world that surrounds them. The teacher's primary job is to deconstruct ideas and teach the students that architecture is built from the sensations that the space transmits and simultaneously, respond to a function.

The value of tutorial teaching in architecture allows students to be given the ability to reinforce their ideas and to be able to interpret their proposals, based on a methodology of (personal) reflections between the Professor and the Student. This process is an authors work, where each Professor put his knowledge and concerns of a lifetime (CONCEIÇÃO, L. 2018).

With this, in the first contact with learning process in architecture, students should be encouraged to understand, interpret and justify their ideas and concepts, that is, their proposals for the architectural space that they idealize and that they materialize through the project design, whether through drawing (sketch or/and technical) or by exploring space through three-dimensional study models built by their hands.

In order to base the general concepts of architecture, students should start building their Architectural Mentality and their Design Process, through the creation of simple architectural objects, where it is important to determinate and understand the value of the structural pathway, the sense of temporality, the organization of the spaces; the light, the textures. All of these occurring simultaneously, develops sensoriality. During their training, students are invited to think about the space based on their "individual library" of sensations, the one that they have been building over time through their observation and their feelings/perceptions? processes!

The emphasis on these sensations and their maturation through the experimentation in design - based on History, Theory and the Systems (Architectural and Constructive), should develop in students the capacity to design and at the same time, to investigate through design with the aim of promoting a progressive approximation to reality. To this process, the students will always have to add the practice of Drawing and Geometry, for a correct exploration of the ideas that they want to materialize in an architectural project.

"New organics are taught radically, integrating the various subjects in a structure built by a central nucleus - project, encompassing aspects of composition, construction, and urbanism. History was understood as a positive retreat to the past in the sense of a positive appropriation. Drawing emerges as a sensitive means of perception, as an instrument of critical analysis and, at the same time, of synthesis that broadens the intelligibility of things."

(Alves Costa, 2019)

Concepts such as scale, function, form, construction, structure and typology are inherent in the design thinking process; even when the students don't realize it. In the first moment of approaching to architectural studies - when students start the first works in Project Studio class - the introduction of concepts like Place and/or Territory, should be taken out of the process to avoid that the students resort their idealization (of a life time) of "house" or "building", which leads to a limitation of the creative act and consequently, of their capacity to concept without rules and limitations. Knowing thus, the importance of the place in architecture!

3. Where to start?

If we manage to identify that the first year of studies in architecture should provide students with general knowledge of architecture and construction, exploring concepts such as form, function and construction (building and structural systems), in an approach to the Design Process and to the beginning of developing an Architectural Mentality, we would have to ask ourselves where to start?

The truth is that probably, in this thematic, there isn't a single (or a simple) answer! Teaching is an "author's work" (Conceição, L.)! Each Teacher structures and defines its own programme of approach.

In Europe. The training in architecture is partially structured by the European Directive that establishes eleven points for the student training:

- Ability to design architectural projects that satisfy the aesthetic and the technical requirements.
- Adequate knowledge of the History and Theories of Architecture, as well as related Arts, Technologies and Human Sciences.
- Knowledge of the Fine Arts and their contribute to the quality of Architectural Design.
- Adequate knowledge of urban planning, planning and skills related to the planning process.
- Ability to understand the relations between the man on the one hand, and the buildings and on the other; between the buildings and their environment, as well as the need to relate buildings and spaces to each other according to needs and the human scale.
- Understanding of the profession of architect and its role in society, namely, through the elaboration of projects that take into account social factors.
- Knowledge of research methods and preparation of project specifications.
- Knowledge of structural design, construction and civil engineering problems related to building design.
- Adequate knowledge of physical problems and technologies, as well as the function of buildings, in order to provide them with all elements of interior comfort and climate protection.
- Technical capacity that allows it to conceive constructions that satisfy the requirements of users, within the limits imposed by the cost factor and by the regulations in terms of construction.
- Adequate knowledge of industries, organisations, regulations and procedures involved in carrying out projects under construction and integrating plans into general planning.

(<http://www.dges.pt> - 2023.04.16)

It is based on these principles that, in Europe, the architecture schools define their programmes.

When we cross the different plans of studies of the main European schools of architecture we find, generally, the concern of introducing domains such as: the approach to the problematic of architecture; knowledge of the basic instruments of design (technical drawing and sketch); and the initiation to a methodology of spatial composition. Where for their perception and maturation, students are faced with carrying out exercises where the formalization of Space is explored from different perspectives to create their own identity with concepts like mass, empty, interior, exterior, rhythm, light, shadow, balance, unity, dimension, scale, spatial composition, time, symbolism and, naturally, function.

4. Author's work

In this process, the Discipline of Architecture is a synthesis that involve different knowledges and practices. The centre where main different areas of studies intersect themselves and contribute to the develop of the Architectural Mentality and the Design Process.

"The teaching and learning of the Architecture Project, contrary to what the designation of the Discipline would suggest, is not a practical application (the project) of a previous theory (the architecture)"
(Providência, P., Canto Moniz, G., 2013)

It is, therefore, in its quality of "author's work" that the teaching of architectural design studio merges the knowledge of the teacher with the Knowledge of the students, which (naturally) being at different stages, leads to a perfectly individual response to the same challenge.

In this search for definition and introduction to the concepts of architectural space, as a first exercise at architectural design studio, in our school, we invite the students to develop an object with specific characteristics. It must have a hand scale without any specific shape or image that identifies it with any existing object, and done in plasticine with white colour. This exercise has five different steps and the students are only aware of the next step after had completed the previous one (so that the knowledge of the next step doesn't conditionate the work they have to do before).

Step 1:

Construct a hand scale object, in white plasticine, starting from the combination of simple geometric solids (cube, pyramid, sphere, ...).

Step 2:

Draw the object from different angles and perspectives, freehand, without using colour, on different supports and with different materials (graphite, pen, Indian ink, pastel, etc.)

Step 3:

Draw the object rigorously (Technical Drawing) using and “finding” its Geometry.

Step 4:

Give a scale to the object and transform it into an Architectural Space, without function or place (it isn't a house, a shopping, a museum, ..., just a space where people can enter a feel for the place). Built this space through a pathway, which generates spaces, border lines, interior and exterior space, built and empty space, light and shadow space, (...).

Explore this space(s) through the design and construction of three-dimensional models (handmade scale models, using simple reused materials).

Step 5:

Represent this Architectural Space through its representation in Technical Drawing and three-dimensional model. Present (communicate) these spaces and the obtained sensations when we go through its pathways.

More than a result or an answer, this exercise seeks the students to develop the ability to abstract and create a concept that is based on pure space, built to create sensations for those who walk through it and simultaneously, teach students that architecture is about promote sensations to those who walk through the buildings and through the emptiness that they leave in the territory where they are located. It is a good method to start thinking as an Architect!

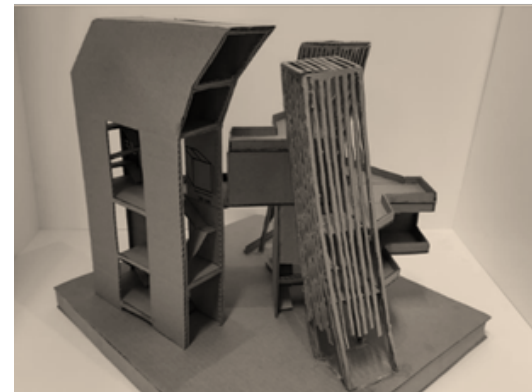
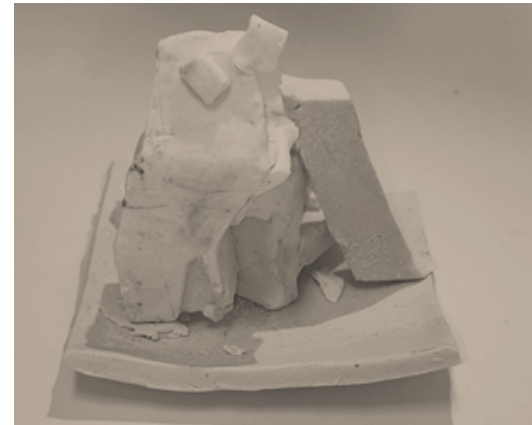


Image 1 to 4. ISMAT Student Work, Joana Paul.



Image 5 to 7. ISMAT Student Work, Iris Nicolau
Project Studio I, 2022-2023

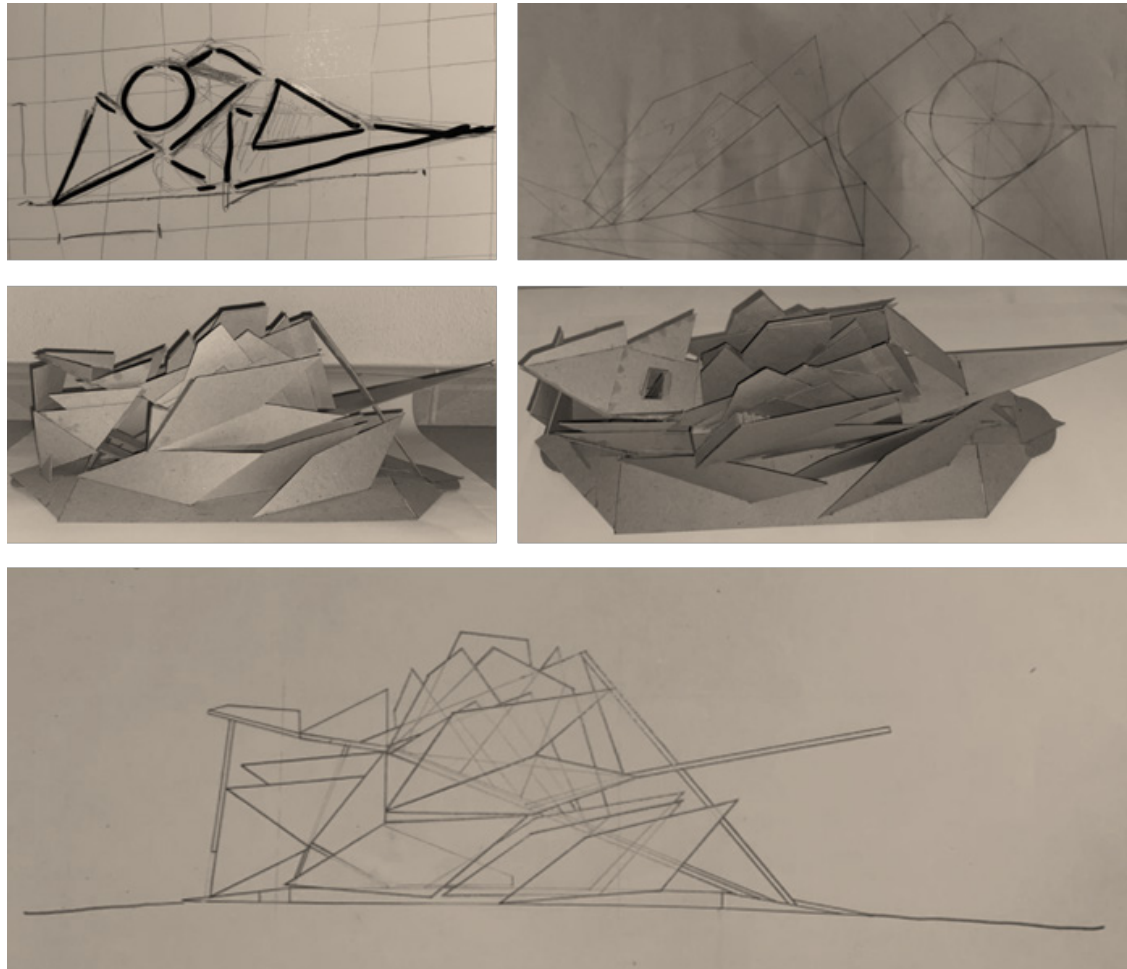


Image 8 to 12. ISMAT Student Work,
Diana Filipe
Project Studio I, 2022-2023

The reiteration of these exercises over the years, with small variations, has allowed us to establish a standard of development of a teaching process, in what is one of the most critical moments of teaching/learning architecture - the first moment - and how it is possible to “override” the previous-concepts that students carry with them, that is, the pre-concept of “designing” a house, a building...instead of creating space and the sensations that it should contain and transmit to its users.

Students most know that architecture is a practice that transcends the design of houses or buildings! It includes a process of thinking and feeling that must be based on history, theory and the systems (construction and structural) that relate people to their environment - the territory, the landscape, the ecological challenges and at the same time, with economic, social and cultural concerns. With the development of this exercise, we want that students understand that architecture have an impact in the territory and that every “wall” have an impact and responsibility. Architecture is never an individual matter and architectural education must be a collaborative project. It is important to verify that with this work students start to acquire a “vocabulary” of concepts that they can apply in the future, when they start to develop design projects based on reality (with a programme, a place, and a function. All they are not allowed to deal in its first approach!

Conclusion

As in any other profession, the architect must be ethical, creative, responsible, optimistic, collaborative. He should also have a strong social, environmental, political, and economic conscience, so that he is able to value the human existence, the ecosystems and the landscape (territory), as each action is equivalent to a responsibility!

We all make mistakes! Students are allowed to make mistakes too! The school is the best place to make mistakes, as it is the big “laboratory” where we can try everything, even what cannot be built, used or reused. Learning is nothing more than the process of making mistakes and to learn from and within those mistakes!

For a project, there are no “solutions”, there are “answers” and even these are never unique! It is important to think about how to construct these answers. It is necessary to test. It is throughout this that the students start building their Design Process, their Methodology and their Architectural Mentality, but they (we) always must reinvent themselves (ourselves). The first solution is just the first one!

It is important to retain that the architectural work - as an author’s work - has always and artistic and an individual component that are difficult to evaluate. So, it is important that each teacher defines his own process and consequently questions that process. The teachers and the students make the schools and stablish the method of approach to develop an Architectural Mentality in them self’s and in the society.

The schools must enable its students to a direct contact with the practice of the profession, to ensure the realization of exploratory exercises that can simulate the reality, where History and Theory merge with practice. No School teaches everything! But each school should provide the tools to increase the student's curiosity. It is up to the students what they will do with their curiosity.

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