



Özlem Berber

Born in Eskişehir, Turkey, 1975. She took her *B.Arch.* in D.E.U., School of Architecture, Turkey, 1998 and *MSci.Arch.* in I.T.U., School of Architecture, Turkey, 2000 with her thesis of “An Investigation on Architectural Knowledge”. She participate in various national and international projects like “Rotterdam Architecture Biennial” in 2005, “Istanbul City Ateliers” in 2005, “Archiprix International Exhibition & Workshop” in 2003, “Istanbul City Ateliers” in 2002, “Turkish Architecture Student’s Meeting, TMÖB” between 1995-2002; as organizer, tutor and/or participant. She has awards from architecture project competitions; applied graphic designs and publishing works as editor and/or writer. For now she is working as a research assistant and continues her *Phd.* in I.T.U. School of Architecture.

e-mail : ozlem_berber@yahoo.com

DESIGNTRAIN CONGRESS-I
Focus 2: First Year Design Education

LEARNING TO NAVIGATE ARCHITECTURE CULTURE:
“Designing a First Year Studio”

Özlem Berber (*MSci.Arch.*), Research Assistant, Fulltime Faculty,
I.T.U. Faculty of Architecture
ozlem_berber@yahoo.com

Sait Ali Köknar (*MSci.Arch.*), Research Assistant, Fulltime Faculty,
I.T.U. Faculty of Architecture
saitali@yahoo.com

Address: ITU Mimarlık Fakültesi, Taşkışla, Taksim, 34437, Istanbul / TURKEY
Phone: +90.212.2931300
Fax: +90.212.2514895

Abstract:

This paper is based on studio experience. We think the best system to create a learning environment for design education is a non-linear, amoeba-like structure that every individual can have his/her personal experience navigating through the program.

The conceptual philosophy of the studio directs attention to the concepts of “culture”, “knowledge” and “education”. Architecture (design) culture is an open-ended environment that is always in motion and in the process of transformation because of the interventions and manipulations by authors of architectural projects, critical texts, history, etc. and also with the contribution of the remote and different areas of knowledge. During the production process of architecture the interaction of the architect with the body of architecture culture is reciprocal. An architectural product takes shape by positioning itself within the body of architecture culture. At the other hand it transforms, removes or adds to the body of architecture culture transforming and perfecting it according to its own agenda. To appreciate the presence of this environment, learning to navigate it and to profit from its potentials -supporting the multiplicities and differences and fostering complexity and invention- constitute the essential challenge for any creative activity within the discipline of architecture. To constitute the awareness of such a cultural environment and the role of the designer within it is the basic epistemological and pedagogical intention of the studio.

In this context, classical taxonomy cannot work if it is about architectural knowledge. Architectural knowledge is not a tree. The structure of the architectural knowledge defines a “network”, in this sense it will always be an incomplete endeavor to discuss architectural knowledge by an approach of dividing it to its “components” and specialization. It does exist only to be a part of the network of relations for the production process of the new knowledge. Architectural knowledge is about generating new forms of architectural thought. Every “built form” of architectural knowledge is an autonomous body within this process of ongoing generation. An architect should be awake to the fact that s/he does always generate a new configuration of relations to produce knowledge for his/her every individual production. Imagination, intuition and innovation are the key concepts of this ongoing process of producing knowledge that must be specially emphasized within the studio.

As a consequence, architectural education must be identified as a complex system and must reflect the nature of the architecture culture and architectural knowledge. In respect of this conception, it is impossible to work with linear equations, truth formulas or guaranteed methods within the studio. It should be a self-organizing process that is continuously nourished with encounters, surprises, juxtapositions and feedbacks. A school of architecture must be seen as a laboratory in which people are working to reinvent the world everyday. The differences and the multiplicity of the interpretations feed the critical thought and the critical thought feeds the production of the architectural knowledge. Every individual proposal for the new forms of architectural thought is the source for an expanding and self-propagating world of architecture culture.

Such a design education approach will be discussed in the paper, and the “First Year Design Studio” given by the authors in I.T.U. School of Architecture will be presented as an example.

Keywords: First year design studio, learning environment, architecture culture, non-linearity, invention.

LEARNING TO NAVIGATE ARCHITECTURE CULTURE:

“Designing a First Year Studio”

özlem berber & saitli köknar

1. Introduction

This paper is based on the experience of designing a first year studio. We think the best system to create a learning environment for design education is a non-linear, amoeba-like structure that every individual can have his/her personal experience navigating through the program.

2. Conceptual Philosophy

Architecture (Design) Culture

Architecture (Design) Culture is always in the shape of a still incomplete body that is always in motion and in the process of transformation.

Can you separate the city into its components? What makes a city a city? The buildings, the people, the trees, the cats, the trash, the highways, the electricity cables, all of its life, its economy, its sociological characteristics... Just like an architect or an architecture student who is sitting on his/her chair in front of a white sheet of paper, we always stand within the city in the middle of a totality, which consists of countless components opening themselves at the same time to our conception. Like the city, the architecture culture reveals itself to every individual architect according to his/her intentions and approaches. The choices we make about the things to see and to grasp is the thing that forms our architecture, which adds up to form the architecture culture.

During the production process of architecture the interaction of the architect with the body of architecture culture is reciprocal. An architectural product takes shape by positioning itself within the body of architecture culture. At the other hand it transforms, removes or adds to the body of architecture culture transforming and perfecting it according to its own agenda.

Architecture culture is not an accomplished entity in itself. It is always in motion and in the process of transformation because of the interventions and manipulations by authors of architectural projects and critical texts, and also with the contribution of the remote and different areas of knowledge. From art to economy, philosophy to sociology, literature to technology, every autonomous cultural production of humanity can intersect causing a productive traffic of information and concepts in-between. This immanent condition of ongoing topological interactions identifies an ideal environment for cultural phenomena that allows interchanges, import and export activities between different fields and experiences of knowledge. To appreciate the presence of this environment and to profit from the potentials constitute the essential challenge for any creative activity within the discipline of architecture. So if we return back to the metaphor, like a city, architecture culture is in essence open-ended. It supports the multiplicities and differences and fosters complexity and invention.

The intentions of the individual architectures, which are the generative power for the architecture culture, can be defined basically by their possible answers to these questions: "What is architecture?" "What is it for?" and "How can it contribute to life?"

Architectural Knowledge

Architectural Knowledge is a network at the end continuously evolving and changing.

It is obvious that an architect should use many of the knowledge s/he had during the process of his/her production. Then how can we identify it? What are the components of this knowledge?

Most common explanation is that they are related to techniques, to functions, to mechanics, to aesthetics, to the representation tools, etc. But what about the architect as an "individual" and a "sociological" being? What about the knowledge which is related to his/her life, experiences, conceptions or intentions? Eventually what happens during the production

process of an architectural product is this: Many kind of knowledge that the architect had from different areas are bind together by and within the operating system of his/her mind which a very complex act is; a concept acquired by a network of concepts changing the network itself and its very perception.

Architectural knowledge is an intellectual product which is achieved by the operations like “thinking”, “judging”, “feeling”, “criticizing”, “reasoning”, etc. That is, the knowledge does exist only to be a part of the network of relations for the production process of the new knowledge.

Architectural knowledge is about generating new forms of architectural thought. Every “built form” of architectural knowledge is an autonomous body within this process of ongoing generation.

The structure of the architectural knowledge defines a “network”, in this sense it will always be a deficient endeavor to discuss architectural knowledge through the approach of dividing it to its “components” and specialization. An architect should be awake to the fact that s/he does always generate a new configuration of relations to produce knowledge for his/ her every individual production.

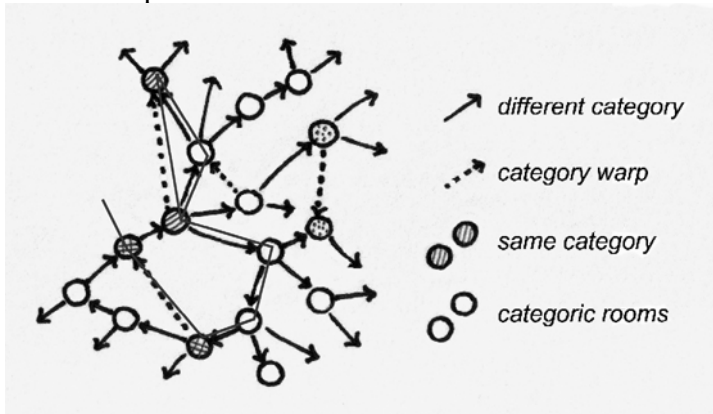


Figure 1: “navigational chart”: “Classical Taxonomy is not working here. Architectural Knowledge is not a tree: *You may have to repeat categories from the first degree at the second and third degrees. Ex:*

1. Structure	1.1. Aesthetics	2.1. Cognition
2. Aesthetics	1.2. Statics	2.2. Structure
3. Function	1.3. Economy	2.3. Social Conditions
4. Social Conditions	1.4. ...	2.4. ...
5. ...		

So if all the headings are visualized as rooms leading to other rooms, some rooms overlap in space. The path traveled between the rooms becomes non-Euclidean. Some doors warps the imaginary space of architectural knowledge and takes you back or ahead to the same room with almost the same number of doors but this time you have a deeper mental map of the path behind a door. Because you already passed that path and you know what is going to happen if you choose that door. Eventually all becomes networked. What you “know” is a memory of all the travels along the corridors of architecture culture. Your “knowledge” falls short to represent what it is in the new now. Nor it can be the ultimate representation. Because every passage from one room to the other alters the space, adds new connections, new doors, highlights some routes, some connections are lost through neglect. The navigation process in the abstract space of architectural knowledge is not to explore it but to make it exist. These wanderings are the source and the body of architectural knowledge.”

Ultimately, designing a First Year Design Studio becomes a navigational problem within the body of architecture culture: Where to start, what to collect on the way, which will help on the more complex assemblages ahead.

Architectural Education

Architectural Education is a matter of conception. The question of “why” and “how” is more important than the question of “what” and it can be best understood by emphasizing on what it is not.

Serious misguided presumptions about architectural education:

1. Architecture can be thought methodologically, repeating every semester an algorithmic agenda and this method can be perfected through time semester after semester.
2. If you learn a unit of the architecture knowledge you are not supposed to forget it and you are expected to integrate that bit of knowledge with all the new stuff you will encounter ahead.
3. When a module of the education system is over, the student has learned the lesson and will responsible afterwards.
4. Using “learning” verb in the passed tense: “Learned” doesn’t exist in architectural education. Learning does.
5. Architectural problems can be divided into smaller parts by excluding some of its other parts.
6. Widely accepted formation of the lesson called “basic design” in the first year of the architectural education is a crucial part of architectural education: There is no such thing as “basic design”. But there is a “basic design studio”.

Many of these presumptions are based on the interpretation of the “school” as an institution in which knowledge is transmitted. In this line of practice architectural education can be identified as a “linear system”. Linear education system supposes that education proceeds just like in the process of building a stone wall, putting a stone upon a stone; everything is learned one by one and for once. The actors of education system are the ones who teach and who learn.

On the contrary, we think that architectural education must be identified as a complex system and must reflect the nature of the architecture culture and architectural knowledge. In respect of this conception, it is impossible to work with linear equations, truth formulas or guaranteed methods within the studio. It would be a self-organizing process which is continuously nourished with encounters, surprises, juxtapositions and feedbacks...

The differences and the multiplicity of the interpretations within a school of architecture feed the critical thought and the critical thought feeds the production of the architectural knowledge. Every individual proposal for the new forms of architectural thought is the source for an expanding and self-propagating world of architecture culture.

Within an education system like described, every actor (so called teachers and students) has equal responsibility. They work together to learn what they want to know about. Thus, architectural education is democratic in essence. The tricky part is to manage to leave and live it as it is.

3. First Year in Architectural Education

The problem with the first architectural design studio is where to start. Even an elementary level discussion in the studio requires a serious amount of new vocabulary and exposure to yet to be studied concepts. One way or another one must plunge in to the architectural knowledge without giving any priority to any given subject. Priority list is the fruit of long year of experience, study and navigation within architecture culture. It cannot be comprehended

without a similar experience. It is generally misunderstood as the “rules” to become an architect or “how to be an architect like me”.

If you engage in the answer to the question of ‘how to be an architect like me’ as an educator, it is inevitable that you are in the comfortable areas of linear equations of inputs to outputs. The result is supposed to be guaranteed and if there are some exceptions it would be the system’s fault. Especially in the first year of architectural education, it is pedagogically sterile and very unproductive to use such a method of education. Many of the students already come with the comprehension of architecture stuck in the ready-made compartments and blocks of meaning and the last thing they need is any formula of the truth. They must be lost, they must be surprised, they must doubt about the things they know, and they must ask constantly what’s this thing’s relation with this and eventually with architecture.

Starting to ask questions is the essential condition for the quality of the studio. If you want to encourage the students for questioning, the best and the only thing you can do is to do the same thing. If you believe and assert that you know what architecture is and the true knowledge is between your two lips, there would be no need for them to think. They would come and ask you for it.

As it is mentioned above, architectural knowledge is about generating new forms of architectural thought and this struggle defines an ongoing process. In the studio, the teachers who are only more experienced students will be called moderators after this point, and the students work together to find out what they want to know. Within this process the concept of “invention” and “creation” can be used as synonymous. Because the most important thing in the first year studio is the collection of what you have experienced and what you have understood during that process, with all the revisions and pauses.

Implementation: Amoeba Model

The inspiring image for the generative model of the design of the first year studio is an amoeba-like organism, which is a complex system that can support its life within multifarious surrounding conditions with its high capability of communication and mutation.

Unlike the linear approach, through the metaphor of the amoeba-like organism, the complexity of the “collective” behavior of many basic and interacting components of the studio; like the individuals, the projects, the voices, the equipment, the city in which we live, etc. can be represented more approximately to nature of architectural knowledge. Every component can be in relation with each other; everything can be in relation with everything.

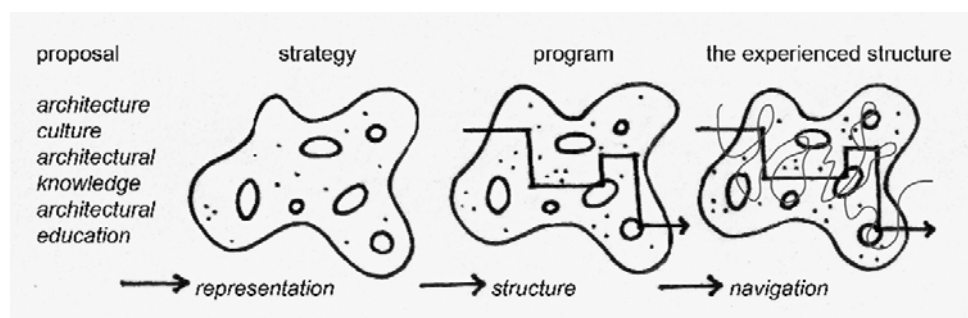


Figure 2: “structuring the studio experience”: “The studio environment can be considered in

terms of components and strategies of assembly. The first assembling strategy for starting is the “program” which constructs a structure for a provisional path within the architecture culture necessitated by the diachronic character of time. If it was possible all the experience could be compressed and transferred in a singular space-time without the need of navigational decisions passing through life. Since we experience the space-time as the way it is, a guiding path giving a vague perspective about the things that are and the things to come is designed. But it must be accepted that in reality during the studio processions every individual navigates independently and experiences his/her own path according to his/her

comprehension, attention and intention. The studio would be the place of communication between these different experiences.”

Strategy: Program & Pedagogy

In order to create a learning environment representing all the contradictions and complexities, twists and turns existing and reproduced continuously in the architectural culture, we used as much as diverse, contradictory but complementary media and subjects as possible, such as a neighborhood in the city and a chair, a graphite drawing and a stop motion animation, a seminar about jazz and a reproduction of a famous 20th century single house. These will be explained in detail in the components. But the drawback with this strategy is that it can be too complex and hard to read and operate upon. It is also a very fallible method pedagogically if nobody understands what is going on in the studio and the urge for a singular linear education ingrained during the high school years among the students keeps rising. So we laid out some backbones hidden inside of the program:

Problematic complexity: *simple to complex.*

Contextual scale: *large to small.*

Work form: *team to individual.*

Precision of representational techniques: *tight to loose.*

Individual originality: *low to high.*

While it is obvious the reason to arrange the project from simple to complex programmatically, we did the opposite with the context. Architecture is not a single-minded object projecting itself in the form of a building or a tower. It is rooted in the very center of the human condition and city life. The aim was to trigger a deeper understanding about the origins of architecture starting to work within the city. It was also helpful to experience importance of studio life in the center of architectural profession. We brought the world within to study on it. At the end with an excursion to Bozcaada we carried the studio to the world to study it in situ as well.

We did not divide the architectural problems into smaller parts by excluding some of their components. Every project from the beginning had tried to be studied within their real existing conditions, with their context, technology, material, program, etc. Everyone in the studio was considered as an architect from the beginning.

We encouraged the individualism and specialization on a subject by not letting them get inside of the studio. We started with “awkward” building programs and ended with the “usual” popular ones such as a house or a museum. But after the trip from *terra incognita* to known lands, they weren’t known as they were anymore.

It was very important for us to experience the potentials and difficulties with both the team and individual working forms within the processes in the studio. When the work was on teamwork status students complained about not to be able to show their own true design power and when the studio was on solo they were crying for some help from their friends.

At some points all of us complained about our ongoing struggle for catching the simultaneous works that have to be pushed together. But we did not compromise. This complex structure of the program was very hard to practice but it supported the interchanges of knowledge between different areas, it fostered the different levels of communication and it made all of us the experts of time programming or developed a strong will to manage time.

Another critical point was the process of evaluation for the projects. We tried to structure open processes for them. Nearly every work that had done in the studio had exhibited in the school corridors. We held juries for many of the projects. The juries comprised participants from different positions like practicing architects, educating architects and students from different years and semesters.

We tried to encourage this question as a starting point for all processes of evaluation: “Is the project you have done is what you wanted to do?” Because we think that the most important thing in the first studio is to “to be aware of what you are doing”. The program was designed to promote this.

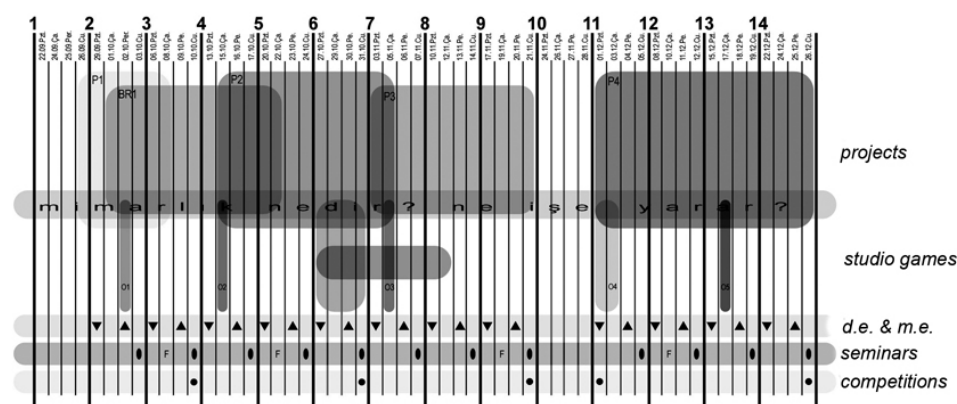


Figure 3: “program chart of the first semester”: “The big colored rectangles are the projects; second one is the reproduction of a building. It is written in the middle “What is architecture? What is it for?”. Triangles in the pink band are technical exercises, squares in blue represent the seminars and dots in the yellow band are competitions. Smaller rectangles hanging out of the projects are the games.”

Components: Content of the Program

The program is composed of several components, which are designed to augment and extend the “known” world of the students from all the possible different angles. The “projects” group is laid out consecutively providing a base and a general platform to collect all the ideas produced in the studio.

Studio games are introduced at the first weeks of a new project when there is a generally a depressive mood or “thinking” climate, bringing some energy and action in to the studio. Technical exercises are positioned rhythmically to give a sense of discipline and dedication towards precision and quality of the produced material. Different levels of communication were used in the components, from the most interactive to the least like competitions. The competitions are not designed to choose the best designer but to create an opportunity to experience what happens when you are by yourself only, promoting a self-respect and time management again. Seminars are also another way of individualization and communication in the studio.

The projects are designed in such a way to produce a proposal easy to exhibit and therefore open to critical discussion. They were exhibited as soon as the projects were finished at the corridors of the school adding liveliness to the environment.

Long term Projects:

. P1: “City Collages”

Problematic complexity: *simple*. Contextual Scale: *very large*. Two staged: *team and solo, outside and inside*. Precision: *tight*. Individual Originality: *low*. Explanation: *The teams were pre-selected. A coin was tossed on a 1:5000 map of Istanbul to choose a place to gather information about. Use of different information gathering techniques were encouraged. The team composed using the gathered material from the place, sketches and pictures a collage.*

And they were asked to enlarge a portion of it and make an exact replica of it using pencil. After a long and painstaking process outstanding results surprised them all setting a benchmark for all. Following months they were asked to draw and work as good as they did in this project, and reminded several times to do their best showing this project as an example.

. P2: “City Discoveries”

Problematic complexity: simple. Contextual Scale: large. Two staged: team and team, outside and inside. Precision: tight. Individual Originality: low. Explanation: Four itineraries were selected from the parts of the city where there is a strong difference in social condition and architecture in only a mile long path. This time they were asked to make deeper analyzes on multifarious spatial organizations and the networks of daily life of the selected areas using some genuine close-ups. Then they were asked to represent the information they gathered and their interpretations in the form of a two and a half dimensional fresco-like section, and an animation movie using the same info.

. P3: “Design of a Scaffolding”

Problematic Complexity: fair. Contextual Scale: medium. Two staged: solo and solo, outside and inside. Precision: tight. Individual Originality: fair. Explanation: A stretch apartment block along an important street were numbered and assigned to students to be modeled. They were asked to design a scaffolding system for that specific building and using the scaffolding to create an interface with the city life.

. P4: “Additions to the city: kiosk +”

Problematic complexity: high. Contextual Scale: small. Single staged: solo and outside. Precision: tight. Individual Originality: high. Explanation: They were given four important public space of Istanbul to design a kiosk incorporated with a proposed surplus function like an info booth, fishing equipment lockers etc.

. P5: “A House” (second semester)

Problematic complexity: high. Contextual Scale: medium. Single staged: solo and inside. Precision: low. Individual Originality: very high. Explanation: They were given a number of sites in an old neighborhood, Kuzguncuk, to design a house for an unknown client.

. P6: “Museum for a private collection” (second semester)

Problematic complexity: medium. Contextual Scale: large. Two staged: team and solo, outside and inside. Precision: low. Individual Originality: highest. Explanation: A field trip to Bozcaada, a Turkish Island close to the Dardanelles Straits, 350 km away from the studio, three nights and four days long was organized. They were required to design a small museum for objects they would like to collect incorporating into their design the experiences they have had in the field.

. RB1: "Reproduction of a Building"

They were given only the name and architect of a single house from early 20th century. They were required to research, collect or produce the plans and sections of the building and a make a 1:100 model of it using only simple materials

. RB2: "Reproduction of a Building" (second semester)

The assignment was repeated with the single houses from late 20th century to contemporary and the results were compared with the first attempt.

Short Events:

- . Studio Games
 - G1: “making your own cupboard”
 - G2: “fold and describe”
 - G3: “animation”
 - G4: “useless machine”

- . Technical Exercises
 - DE: “drawing exercises”
 - ME: “modeling exercises”

- . Perspective experiments
(second semester)
 - Perspective Machine
 - Drawing Plane in the space
 - Camera Obscura

- . Competitions
 - C1: “biennale sketch book”
 - C2: “writing the sounds”
 - C3: “transforming furniture”
 - C4: “draw a map of a mystery novel”

Seminars (first semester):

These were the lectures by us about the subjects we were interested at the moment such as: “object / function / form”, “modern art”, “architecture / motion / cinema”, “constructions / orders”, “points of articulations”, “materials”, “light and shadow”, “information design”, “archetypes”, “experience design”, “architecture / time / change”.

Seminars (second semester):

These were the lectures that were prepared and moderated by the students about the subjects such as: “Miniature / Perspective”, “Seyfi Arkan / Le Corbusier”, “Pompidou Center / Jazz”, “Bauhaus Theatre / Cubist Painting”, “Collage / New Babylon”, “Sonic Youth / Jackson Pollock”, “Origami / Koolhaas”, “Ecological Design / Alev Ebuziyya”, “Archigram / Andy Warhol”, “Constructivism / Zaha Hadid”.

4. Assessment and Evaluation

During and after this studio what was experienced is carefully evaluated due to the reasons of minute change and reprogramming of the core program. At the middle of both semesters students were asked to evaluate themselves one by one privately in an open conversation. After every project in the evaluation discussion what they said they have experienced closely matched with what we wanted them to experience.

We were aware from the start about the fact that, the design and process of the studio, was a proposal concerning our conceptions on architectural culture, architectural knowledge and architectural education. Ultimately the whole studio was an exciting experiment of this proposal in itself. If the same team were commissioned to design a first year studio again it would be different content, another experience, another path to go through but with the same understanding of architectural culture and learning to navigate it.