

The Design Studio as Teaching/Learning Medium – A Process-Based Approach

Maya N. Öztürk and Elif E. Türkkan

Abstract

This article discusses a design studio teaching experience exploring the design process itself as a methodological tool. We consider the structure of important phases of the process that contain different levels of design thinking: conception, function and practical knowledge as well as the transitions from inception to construction. We show how this approach to the design process allows the possibility of addressing elusive issues that underlie the practice of design.

Introduction

The second year design studio of the Department of Interior Architecture and Environmental Design at Bilkent University is the first to introduce the students to inhabited space. The students are confronted with two kinds of difficulties. On one hand they need to actualize knowledge acquired in different theoretical courses pertaining to building, construction and materials, history of architecture and so on. On the other hand, they have to implement their knowledge and skills established during their Basic Design experience into a design for human occupied space, where their intervention has serious experiential and existential consequences.

Taking into consideration the many factors of their training, the crucial aim of the design studio is to equip the student as a professional. Hence studio work frequently relies on a reconstruction or simulation of the circumstances of practice. Consequently, studio education tends to be dominated by the object or building as constructed in practice. In other words, no particularly educational paradigm (model) is immediately available. This practice-derived emphasis on the material object as the product of design highlights a difficulty of studio work to correlate such diverse levels of thinking and issues in a structured framework.

While the building or object comprises the major product of design, the construction of this product is not straightforward, and needs be dealt with explicitly in design studio education. Design work requires a coordination of issues of human physicality (body, dimensions, perception, behaviour, etc.) as well as structural and technical matters (materials, techniques, building performance, etc.). These issues constitute a technical/practical level which, together with a variety of professional considerations such as site, programme, space, and client, comprise the practical basis, directly affecting design solutions (as well as evaluation).

Other than these issues, design studio education deals with certain specifically architectural concerns (and techniques) regarding the forma-

tion of space: spatial/functional organization and formal composition and articulation, affecting the construction and perception of beauty and meaning. Each design, more or less explicitly, addresses issues of expressiveness (representation and identity) of space and their relation to contents. Arising through creative interpretation, these are not tangible and therefore lack univocal definition. From the perspective of design studio work, all of these layers/levels are of different instructive value, and do not easily come together to form a coherent system. Rather, they require a correlation, the workings and mechanisms of which are liable to remain unarticulated within a 'magical' creative act, especially when overshadowed by the materiality of the object/product.

The design studio experience described in this article explores certain potentialities, which the design studio as educational medium might offer. It aims to open up and specify the practice-based model of design-as-object, by exploring the design process itself as a methodological tool. Thus the process is augmented and structured by some key instances, articulated as sites, at which different kinds of work (and discussion) are made legible: study of sources, deriving of references, inception of ideas, depiction of requirements, as well as their possible reconciliations and subsequent translations. Exposing such instances to consideration allows inherently different levels and issues of design thinking to be discerned. Moreover, as an educational medium, it yields mechanisms to embrace these in tangible ways both vertically – those issues pertaining to conception or idea, requirements of function or activity, various inputs of practical knowledge – and horizontally – the various transitions between inception and idea as well as construction and form. By asserting an explicit structure of the design process for conscious inquiry, the student obtains certain means – awareness, time and techniques – to construct links between them at particular instances of the design process and intensify her or his personal design framework. Consequently, this approach offers a means to

justify choices and translations made throughout design, and construct the final product consistent with an explicit intention. Hence the instance of conceptualizing a design idea can be understood as the instance of incorporating meaning into the formalization of place. Operating in this way, this particular approach does not imply repetitive exercise, but on the contrary: from the teacher's perspective it helps specify the strategies to communicate specific ideas; from the learner's perspective it helps generate designs which are explorative, inventive and valid simultaneously. This framework can rather be perceived as self-renovating, since both teacher and learner are set within a continuous rethinking and reformulation of the pragmatic, aesthetic and ethic codes underlying a design intervention.

The framework

Each design studio project culminates with a designed object. The emphasis of a project on an end product tends to hide some key problems concerning the integrity of the framework of teaching, learning and assessing design. When studio instruction takes the material object as the key factor of design, it necessarily tends to stress formal properties, and the corresponding techniques of formal experimentation. Attainment of meaning (here meaning is understood to be ingrained in the design decisions and choices – arrangement, form, materials, etc. and their relations to content) is concealed within a more or less mysterious creative act which is difficult to comprehend. In such a practice the credibility of design, involving such things as identity or expression of space as elements of the aesthetic significance of the design intervention, tends to remain implicit.

Having struggled with such problems we began to search for alternative ways of constructing and conducting the studio framework. Instead of the accepted referent of design, the object or product, we began exploring the design process itself as a methodological tool. And, indeed, we began to perceive the instructional potential, embedded in magnifying a sequence

of instances to structure the process, as it might yield a valid approach to teaching/learning.

Such instances actually articulate some of the critical passages between stages of design. This magnification provides the possibility to stretch the duration and scope of the task at each passage/transition. Thus questioning is made integral in the context of specific work, which stimulates the formulation and reformulation of the thought process for such transitions. On such sites the development of a design idea (research, analysis, interpretation, idea) can be coordinated with the various practical concerns a project has to resolve, such as the requirements of human occupancy (dimensions, movement, perception) and other design issues (site, programme, client's requirements), etc. Thus at each site an expanding and intensifying of the respective idea to guide design is made necessary. Hence it becomes possible for the student to perceive not only the constant to-and-fro between levels of thinking, but also to establish mechanisms by which diverse issues can be connected. In terms of the design progress, each passage requires and enables a tight linking with subsequent stages. The student is made conscious of how the different aspects of a problem may enhance each other.

The studio conduct: the brief as structuring device

Corresponding to such a design studio framework, a structuring of the design process is established with the brief. The function of the brief is not limited simply to essential information about the subject of design. It introduces the design problem so as to make legible the different stages of the design process, thus highlighting the intentions of this design studio approach. This way the students gain an overview of how the various steps connect and form their design experience.

In this design process a 'title' may not only name the actual product; it may also begin to conceptualize the issues at hand. A 'problem definition', kept minimal, states only the general purpose, while other essential information is

structured under distinct headings. One of these is 'source', which focuses on some of the factual elements as subjects to be studied, interpreted and ultimately used to derive references for design. The 'process' explicates the different practices that are involved by describing the kind of work (research, mapping, reading, interpretation, various translations, and formal explorations), its purpose, as well as the expected outcome (reference, idea, relations and formalized space) for each of them. To complete the brief, the 'product' states the presentation requirements for the final design. The 'schedule' sets the time limitations of each stage.

The process itself can be opened up according to the complexity and duration of the project at hand. Thus it usually contains research and/or analysis (of an activity, relation, given space, etc.). This first stage aims to figure out and establish references as to specific conditions, circumstances, perceptions, experience, but also to specify programmatic requirements. This is the stage for various detailed studies such as: the human body and its relation to objects and space, issues of social space in terms of human relations, behavioural and social patterns, preferences, conditions, etc., as well as the analysis of the space for a design intervention (if such is assigned). In terms of methodology this stage is rather important. It produces discussions, which help constitute and substantiate the design basis whereby the student has to refer to the knowledge acquired in previous courses to gather relevant background knowledge to handle the problem at hand. Moreover, this is the stage which allows questioning preconceptions, as students are led to rethink and re-evaluate factual knowledge according to the specific conditions and context of the respective activity/setting.

The interpretation of references for the design process aims to provoke their individualization, as well as to convert these into a theme and initial idea – making their design intentions and implications legible. Discussions at this point aim to question the proposed interpretation of the refer-

ences and concepts that inform the design problem as to its relevance as well as to its possible relations to other programmatic aspects.

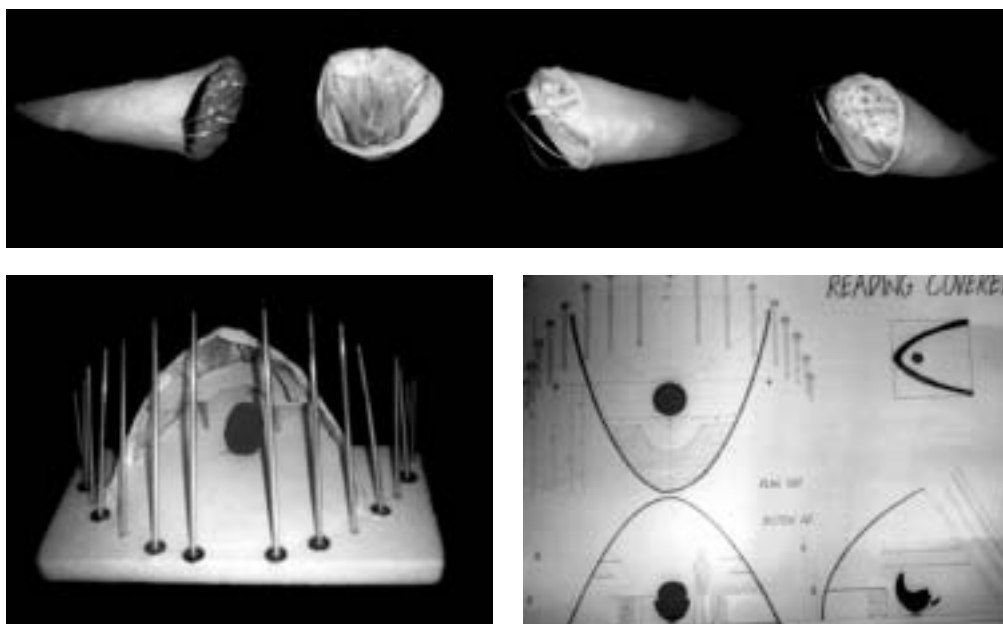
The following stage, inception, provides the actual frame for design in terms of a design idea or statement. Discussions at this stage aim to help the student clarify his or her thoughts, establish and check for logical consistency, and see how this intention may generate potential for spatial expression. Thus it actually links research and interpretation to functional and spatial composition.

The formalization stage involves the exploration of the implications of the design idea by attempting its expression through different spatial and formal compositions. Here the design idea can be asserted as a design tool, guiding functional organization, as well as all kinds of spatial articulation, involving various choices of materials, techniques, furniture, etc. As a translation between two media, verbal and spatial, this stage allows discussions, which raise awareness to possible diverse readings of space. The student may clarify his or her idea, as well as study probable effects arising through his design intervention. It is the stage of spatial experimentation, where various views of space, its perception, experience, etc. are actually discussed.

The projects

We have worked with such a framework on problems of various duration and complexity. For instance the problem 'a place to recharge' was a short-term assignment, meant to guide the students into the problem of inhabited space by focusing on a singular activity. This problem aimed to generate a space through focusing on the notion of 'recharge' in terms of a specific activity. The choice of an interpretative frame (exposed, covered, slack, tense, stable, fluctuating) and an activity (dreaming, reading, acting, meditating, dancing) provided the sources to derive a design idea.

For instance, Burcu Bilgenoglu expressed her insight as to the essence of the activity of 'reading' as a simultaneous concentration and growth.



On the other hand, her interpretation of the frame 'covered' implied the condition of being protected and contained. Juxtaposing these two, she proposed a design idea as 'focusing to expand'. As this project was the students' first exercise in translation of an idea into space, they were asked to produce a conceptual model, which helped to demonstrate the expressive potential of an idea. Bilgenoglu's conceptual model (Figure 1) was initially exploring enclosure solely, albeit an expanding enclosure.

Dwelling on the spatial implications of her design idea, Bilgenoglu decided to emphasize the experience of the condition of 'being covered' by contrasting it to the idea of exposure. Thus her further translations into space formalized the expressive potential of two distinct spatial and experiential conditions, which corresponded to the focusing and expansion of 'reading'. She developed her project into a composition of two interacting boundaries. Thus, she established the focus, the place of the inhabitant, by intersecting different but mutually supportive and overlapping spaces and boundaries (Figures 2–3). The organization of the programmatic requirements,

derived by analysing the necessities of the activity, relied again on her design idea: surrounding the reader with bookshelves, reading table, etc. and thus enhancing the feel of the cover. In keeping with her idea she placed the user of the space on a single chair simultaneously exposed to two distinct boundaries. Thus she realized an experience at the incision of two conditions.

The project 'a space of occasion' addressed issues pertaining to social space. In this case partial space boundaries were given, comprising one of the sources for the formulation of a design intention. The other source was a suggested 'occasion' (compassion, negotiation, recognition, argument) in an encounter between two inhabitants, in which particular relationships and conditions are embedded. Gün Gökaya proposed an interpretation of the condition of 'recognition' in the context of the work of two distinct artists, namely Frida Kahlo and Malevich. In his case 'recognition' was to be enacted hypothetically as an 'intersection of different kinds of awareness', where each artist was to perceive and accept the other. The formal explorations of this design problem were supported by a two-

dimensional study. It was to depict the content of the occasion, integral to the reading of the spatial source. Thus two intersected rectangles stand for an abstract expression of Gökkaya's interpretation of recognition as partial acceptance of the other, also incorporating his reading of the given spatial traces – implying the contradiction and correlation of two distinct geometrical systems (Figure 4).

His design enforced the clash of the given space fragments, producing the place of encounter as a link between the two respective components (Figure 5). Formally this link was derived by extending and intersecting the traces of the given elements. This way the project aimed to express both the impact and the acceptance of the distinct others, producing a double coded reading of the respective spaces. The link, materializing the encounter, could be perceived as overlapping and as a special place simultaneously. In terms of functional organization, the two respective spaces held the work areas of the artists, while the link served as the place of discussion and exchange. In terms of spatial articulation, Gökkaya reinforced the effects of his design intention by articulating his intersecting spaces in differentiated ways.

The problem 'compositions' dealt with more complex functions. Here the students were confronted with the concept of home, in the context of the relationships arising between two strangers sharing a space as long-term habitation. The sources in this problem – an actual space and some distinctive features of the inhabitants – were to be explored in various ways. The space was defined as a double height terrace unit, to which they were encouraged to insert a partial mezzanine. The inhabitants were depicted as gay / straight, introvert / extrovert and accountant / actor, each suggesting a different human aspect to be explored. To develop a keen understanding of the space the students made various studies as to its geometry, volumetric properties, lighting conditions, dynamics, etc. They were expected to arrive at their personal interpretation of the given space and develop an ability to utilize

its potential. On the other hand, the students were to consider distinctive life patterns of the inhabitants, and interpret these to suggest probable relationships between them in temporal and situational terms. The design idea was to be developed through the coordinated reading of the two sources.

Mehmet Satiroglu's interpretation of the given space emphasized the contradiction of the different angles, on which the plan was based. Interpreting these as two geometrical patterns effective in space, he presumed that one of them converges and contains, while the other exposes. His interpretation of the accountant/actor relationship was that although their life patterns appear irreconcilable, deep down there are similarities that help to form a common basis. He formulated his design idea as 'exposure of the unexpected', meaning the surprising convergence of apparent differences. Prior to the intervention into space, he visualized this idea in terms of a two-dimensional scheme (Figure 6). There a monolithic circular contour, rendered solid, attempts, but only partially succeeds, to embrace a square, which in spite of its weightlessness, appears to force its way out. Thus he achieved an expression of the tension between distinction and containment, an apparent differentiation and discovery of an overlapping essence.

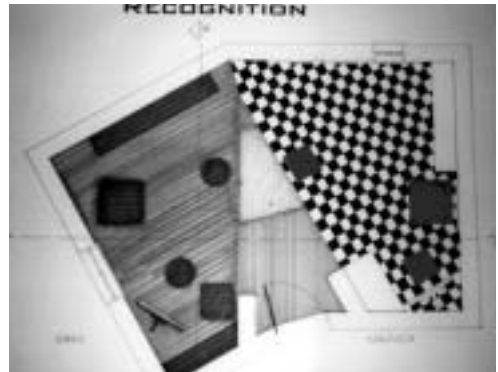
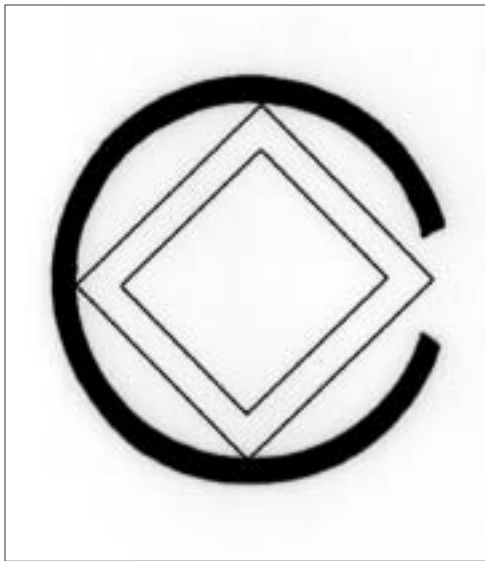
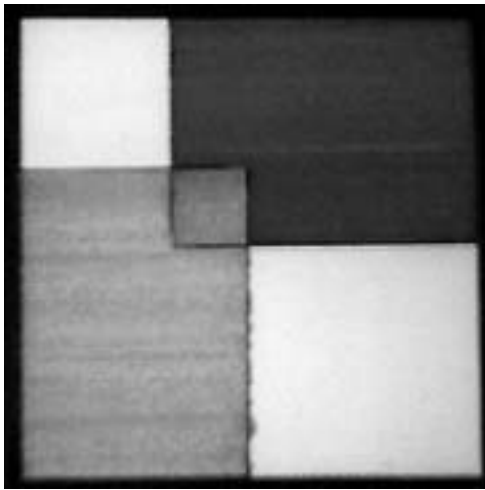
His translation into space expresses this idea in several ways. The basic intervention into the given space is achieved by a wall, which is skewed in such a way that it exposes and intensifies the irregularity of the given space defining elements. This wall both hides and suggests different functional and spatial units. It supports the special emphasis assigned to the circulation pattern, which is thus strictly defined but abruptly changing direction, achieving a special quality of the perceptual sequence (Figure 7). Satiroglu attempted to reflect his design idea also in terms of articulation, especially perceivable in the detailed treatment of his wall. It possesses a controversial character by holding the stairs circu-

Opposite page:

Figure 1
Burcu Bilgenoglu –
Conceptual model

Figure 2
Burcu Bilgenoglu –
Model

Figure 3
Burcu Bilgenoglu –
Drawings



lation, which reappears on the 'hidden' side modified to a display elements of furniture. On the other hand, rendering visible the conventionally intimate, thus hidden, bedrooms enforces the function of the wall to conceal and surprisingly expose different activities and spatial settings. The bedrooms are placed as legible volumes in the distant corners of the space linked by a disquieting bridge (Figure 8). Their location utilizes the expressive capacity of the different corners corresponding to the suggested characters. While the semi-transparent, even semi-open boundaries of

the bedroom units support the idea of exposure, and frequent encounter, distance and restricted access suggest adequate privacy.

Concluding remarks

Design, inevitably, involves both conceptual and practical levels of thinking. Disregarding the order in which they are put into practice in studio work, they tend to remain separate as design concerns and in evaluation. To exemplify, one may refer to just two extreme cases frequently encountered at assessment panels: 'a space, which function-

ally works, but has poor aesthetic quality', or 'a space with unique experiential quality, where function is rather an excuse'. For less experienced student groups, the effective coordination of such different levels, and issues, into a design object is difficult. Such, apparently inherent, discrepancies within design practice then raise a substantial issue for studio education. It has to confront these drawbacks, and possibly help generate strategies to obliterate them.

In this respect, the process-centred studio work proposes an exploration of just such educational means. Within a structured design process the students are made aware not only of different levels of the design process, but also of some possible approaches to integrate idea, conditions, requirements, contents and form in a conscious way. The sequence of specified work assigned to the different stages, as described above, admits such diverse concerns into the personal design framework gradually, whereby each aspect can be contained and employed to enhance each other's impact, and obtain an intrinsic coherence between them.

Magnifying the structure of the design process in terms of stages makes room to consider carefully relationships of form and content in terms of their interdependence for the product and the cause of design. It allows tracing the transformations a design idea undergoes while maturing, and perceiving this as a central focus for design. It allows encountering and discussing the generation of meaning in space, which evolves through such correlations (source, idea, programmatic requirements, etc.) and their possible expressive powers. Moreover, it also allows the students to begin to question the consistency and consequences of their work, thus finding themselves engaged in an inquiry into the credibility of the design intervention itself.

Inciting such inquiry is another substantial contribution of the design studio to the formation of the creative identity of a future designer. In relation, for example, to architectural space and human habitation a credible design intervention might be about space that can be taken posses-

sion of, about space, which begins to bear tangible traces of human presence, by which it might evolve into a place of dwelling [1]. This appears to entail a search for significance in terms of expression of purpose, rather than expression of technique itself [2]. Claiming such a quality, engendering capacities of space as an artifact, might be anchored within an exploration of how space may come to intensify a unique condition within, and a unique way of asserting life [3].

In the context of the proposed teaching/learning framework this 'function' of design can be made legible for conscious pursuit. Thus, rather than be taken for granted, a research, analysis and interpretation of even the most conventional or habitual activities could offer insight into fundamental existential conditions. Such 'essences' having been 'discovered' with considerable personal involvement are used to generate a design idea. They appear to formulate a sound basis of a credible design, constituting and tracing the 'content' on one hand, and on the other bearing unique creative participation.

In that respect design sources might be of different kinds: activity, event, relation, a state of mind, a given space, a tool or object. They might be explored in different terms: to establish a model, paradigm, idea, concept, or reference and so on. They may work differently in space, showing a tendency to fall into various categories in terms of their implications as to the materiality of the design. Translations into space may vary largely: some would apply to the emplacement of functions, depicting the design intention through particular life/space patterns; others would invoke components of experience, the circumstances of an activity, relationships between spatial elements, etc. Yet such explorations bear a promise, as each of them offers valid paths to a responsible and responsive space design, touching upon notions which might be considered worth pursuing as embodiment in space. As to design studio instruction, it can be seen as a ceaseless search for methods to raise awareness, anchor knowledge, and engender skills to acquire genuinely inhabitable space.

Opposite page:

Figure 4
 Gün Gökkaya –
 Two-dimensional
 representation

Figure 5
 Gün Gökkaya –
 Drawings

Figure 6
 Mehmet Satiroglu –
 Two-dimensional
 representation

Figure 7
 Mehmet Satiroglu –
 Plans

Figure 8
 Mehmet Satiroglu –
 Model

Note

This article is based on the presentation for the 19th EAAE International Conference: Re-Integrating Theory and Design in Architectural Education, Ankara, 2001.

References

1. Heidegger, M. (1971) Building, Dwelling, Thinking, in Hofstadter, A. [Trans.] *Poetry, Language, Thought*. New York: Harper & Row, pp. 145–61. Heidegger's concept of dwelling appears as one of the few anchors and clues for valid and meaningful space formation, as it engenders concern and account of human existence and dignity. In turn these allow interpretations to specify possible properties and qualities of space. See gger's Thinking on Architecture.
2. Adorno, T. W. (1997) Functionalism Today, in Leach, N. [Ed.] *Rethinking Architecture: A Reader in Cultural Theory*. London and New York: Routledge, pp. 6–21. Adorno's argument involves a critical discussion of the current tendency of architectural expressivity, which seems to have turned into a self-representing exercise, deprived of deeper meaning.
3. Gadamer, H. G. (1997) The Ontological Foundations of the Occasional and the Decorative, in Leach, N. [Ed.], op. cit, pp. 126–39. In this essay Gadamer distinguishes between two different attitudes to architectural form; one deeply integral and rooted, the other applied, by which he suggests a platform for thought and discussion of architectural design in both ethic and aesthetic terms.