

EXPERIMENTAL AND CREATIVE DESIGN METHOD FOR THE FIRST YEAR ARCHITECTURAL DESIGN STUDIO

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Abstract

Introduction

Our design studio is described as process-oriented approach. Small and simple functional problems could be subjects of this design studio. It can contain small and simple projects, such as a house design, kindergarten, cafe or a bookstore. In our approach, to support the final design, we decided using the semester as a whole by dividing into different problem solving small projects that can result in a much complex design problem.

Method

Our main aim was to give to students about spatial and volumetric compositional thinking and perceiving. The initial step of the practiced method is to use some concepts shared by visual arts and architecture, such as, balance, continuity and domination. After that, we asked students to create some compositions in two and three dimensions considering the given concepts. In the later step, we tried searching these concepts in worldwide famous artists', Malevich and Mondrian works. Then we chose some works of these artists and gave to students as a starting point to construct spatial and volumetric relations. Last step was to apply the way of thinking relations improved to the final design project.

Conclusion

This approach helped students to improve their visual thinking and to imagine how two-dimensional designs can be shaped in three-

dimensional volumes while considering functional programs. They tried to learn the importance of color, composition and conception in architectural design. The colors used by students in their works supported the resolution of volumetric relations in their design process. This deductive method can be seen one of the initial step in architectural design education for further design investigations of the architecture students.

Key Words: Architectural design, compositional thinking, visual arts, problem solving, process-oriented approach

Method

Students' awareness of their architectural design process is quite important. Achieving the awareness of design process depend on the students' maturity of manifesting compositional dynamics. This dynamism shows itself in graphical studies joining with students' individual creativity. So, creating and exploring imaginative forms in two and three-dimensional graphical studies is one of the main goals of architectural design education.

Dynamic fictions and images, both in architecture and in other arts, can be achieved by concepts of "balance", "continuity" and "dominance". In architecture and especially in modern paintings "balance" can be achieved by symmetry, asymmetry and radial inclinations. The concept of "continuity" can be applied by different methods depending on repetition, change, development and progress. "Dominance" can generally be easily identified when a form or group of form expresses itself strongly in a composition.

Compositions, which have an inner dynamism determined by the above-mentioned concepts, can be achieved with basic geometrical shapes. These geometrical shapes can be transformed as surfaces, planes and volumes, which carry the content of spatial relations. Students are creating their spatial designs by utilizing some of these elements in any level of the design process, in accordance with the necessity of each phase.

In architectural design studio one, students are expected to design compositions freely according to concepts explained above in the first phase. Second phase includes interpreting compositions of selected artists -Mondrian and Malevich- and then creating three-

dimensional architectonic compositions related to internal dynamics of the artists' work. As third phase, this created three-dimensional architectone, which can still be considered as an artistic work, should be related with architectural realities and functions as: scale, function, ratio etc. In the fourth phase students prepare and present their designs as an architectural project. Last phase is to design a new project, which has logic of previous experience in a traditional urban form.

First phase: Introduction to concepts

Architectural design is a multifunctional phenomenon. It has many factors related with art, architectural design to construction. Architects can give various decisions according to conditions of design. Art plays an essential role in shaping decisions and it is integral part of architecture for many years. The concepts, "balance", "continuity", "domination" can be accepted as fundamental concepts of both art and architecture (Doruk, 1973).

These concepts include sub-concepts, which support them. While concept of "balance" consist of "symmetry", "asymmetry" and "radial", continuity concept consist of "repetition", "change" and "evolution". However, the concept of domination can be seen any condition such as using color, forming volumes, organizing repetition.

In the first phase of architectural studio the concepts mentioned above is introduced to the students. Then they are expected to design compositions using color, plane, surface and volumes. Thus, together with the exercises base on planar and volumetric compositions, creativity of the students can be improved (Figure 1-2).

Students try to give an impression of architectural space and building in their compositions. Their training continues from two-dimensional works to three-dimensional ones. This kind of exercises free architectural students from traditional designing methods and give them an opportunity to use their imagination generously.

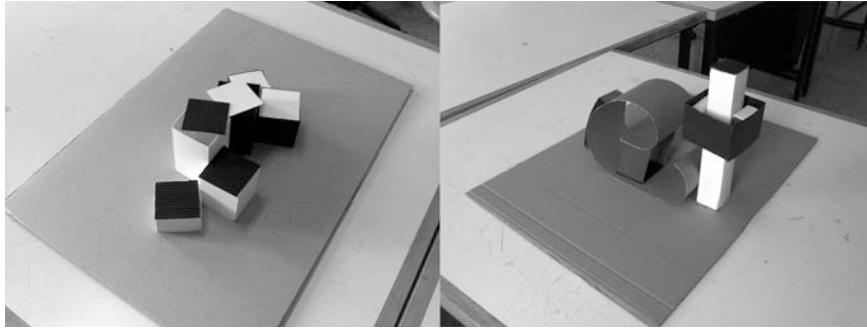


Figure 1. Balance and asymmetrical works based on volume and surface compositions.

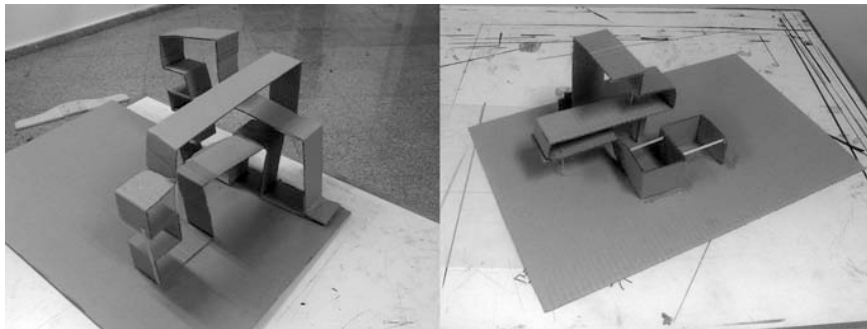


Figure 2. Experiencing spatial potentials of continuous surfaces.

Second phase: Volumetric interpretation of the modern paintings.

Formal elements can be classified in two groups: elements on a plane and spatial elements. Elements on a plane composed of linear elements and planar elements. Planar elements offer many training material for architectural compositions. Regular and irregular figures come together with many linear or nonlinear geometrical arrangements to emphasize the architectural dynamism (Chernikhov, 1931).

In the second phase of the design studio two famous modern painter's works – Kasimir Malevich and Piet Mondrian – are selected for interpreting as a three-dimensional experience. These paintings are proposed to the students which they have well defined composition dynamics and constructional order. Paintings also

reflect the concepts of balance, continuity and dominance in a perfect manner and we can see the similar situation in using of colors. Students must consider the rules of organization of lines, planes and colors in paintings then should evolve the same logic in three-dimensional versions of the paintings (Figure 3-4).

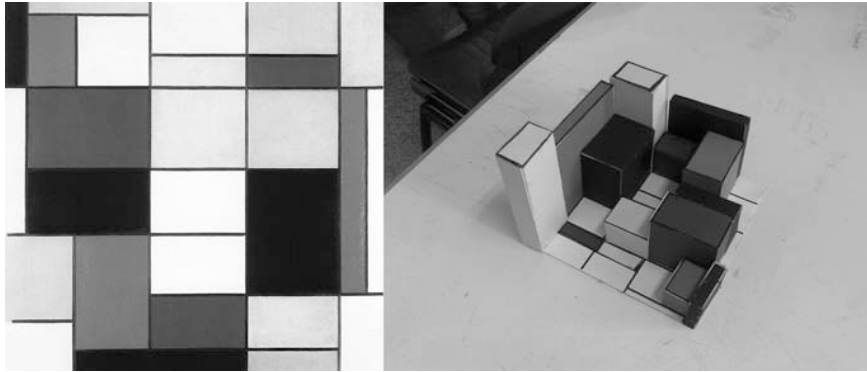


Figure 3. Piet Mondrian, Composition A, 1920, and volumetric interpretation by Sedef Bozkurt

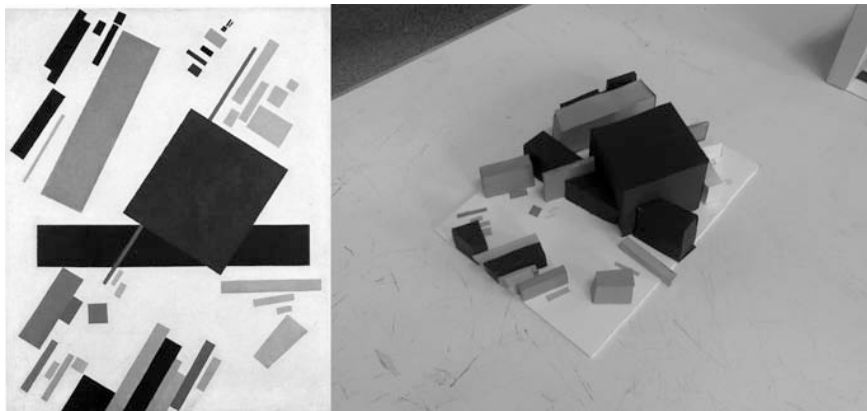


Figure 4. Kasimir Malevich, Suprematist Composition, 1916 and volumetric interpretation by Gevher Boyalı

Third phase: Realities of architecture: size, proportion

Subject of this phase is to determine a function to three-dimensional composition. After giving a function students must find the correct sizes for their compositions. Generally basic functions should be chosen, such as house, café, mini library, small art gallery etc.

Compositions of the students are still an artwork before giving it a function. Function separates artwork from architectural one. Artworks don't have a function in general. Architectural works depend on function and size. Without damaging the general proportion and the balance of the compositions, students should give a proper size to them (Figure 5-6).

Buildings are the architectural products which is experienced and lived. That's why their size should be suitable for human being. This normative structure of architecture and the building rules are reminded to the students and also they are major subject of the phase.

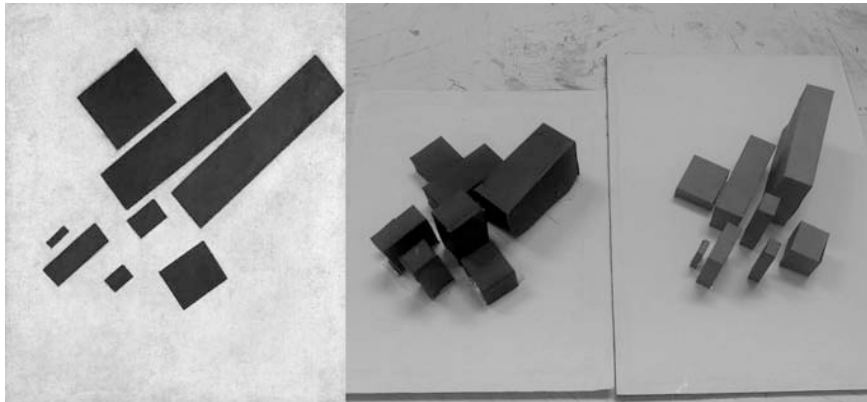


Figure 5. Malevich, Eight Red Rectangles, student interpretation. Project of •emiye Do•an.

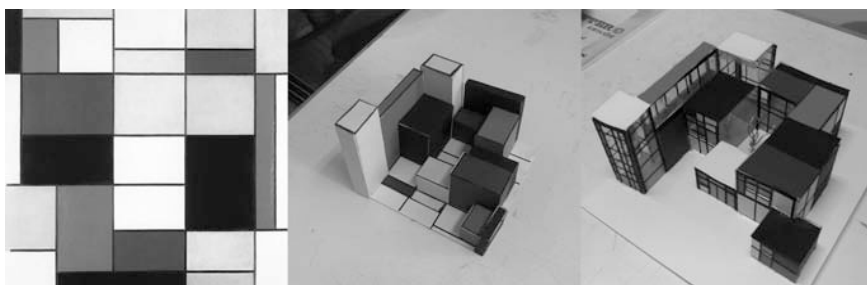


Figure 6. Piet Mondrian, 1920, student interpretation. Project of Sedef Bozkurt

Fourth phase: Study of composition as a building

Aim of this phase is the study of composition, which is given architectural function, as a building, as an architectural project. Each student focuses his composition and tries to design the spatial characteristics of the building. Critical moment is the reflection of the dynamism of the composition to the spatial solutions of the project. While designing the building they struggle to create meaningful, well sized, and well proportioned spaces.

Using of color is also important factor for architectural design solutions. Students use color compositions to separate spaces from each other and to emphasize the material solutions that is used in their projects.

Phase is finalized with the presentation of the project in orthographic representations. Logic of the presentation, which is expected from the student, should be similar to the sense of the project's composition.

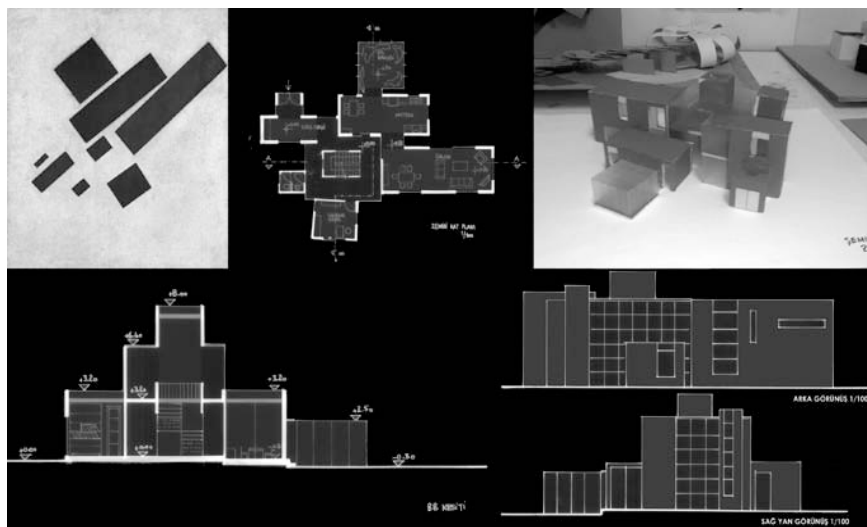


Figure 7. •emiye Do•an, the House. Interpretation of Malevich's composition as a house.

Fifth phase: Applying same logic to a new architectural design

The final phase of the architectural studio is the effort of applying the previous experiences, skills and knowledge to a new architectural design solution. Thus;

A. To work in an urban space which has a special character,

B. To decide a function, which is suitable to the built environment,

C. To develop a dynamic composition – balance, continuity and domination – which is proper for selected function.

D. To consider the dynamics of artist compositions in previous sections and preserve the logic in new architectural solution are expected.

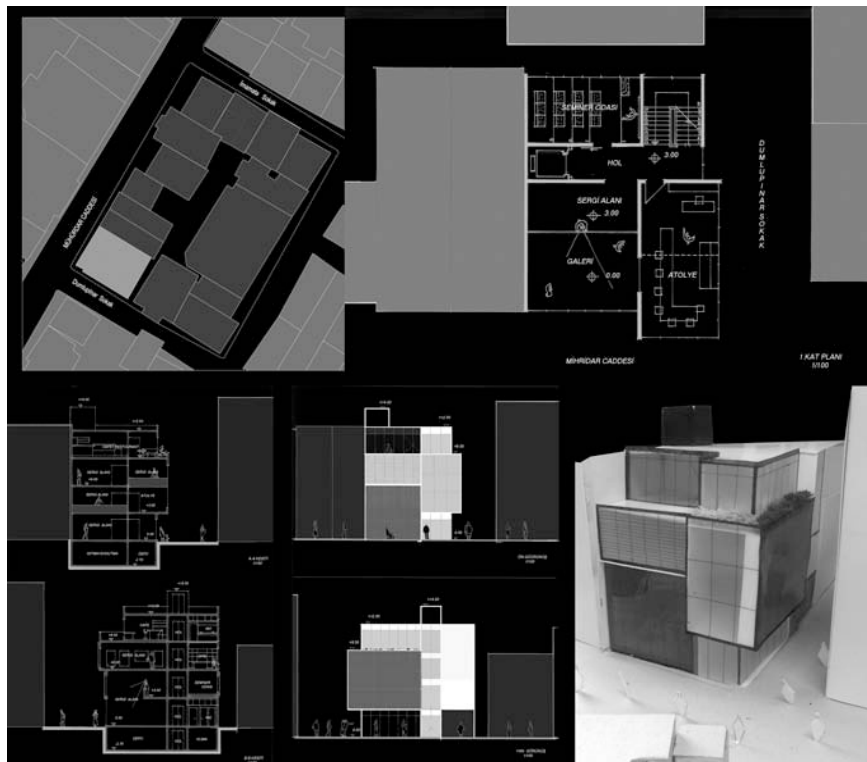


Figure 8. Rem Koolhaas and Shigeru Ban. Art Center at Kadikoy in Istanbul. Interpretation of Mondrian.

Conclusion

Architectural design studio has started with using concepts which essential for both art and architecture. These are used to support for creative process in architectural design education. Studio practically lasted in success as expected. Students examined their creativity by forming dynamic compositions using basic geometric figures. Modern artist – Mondrian, Malevich – paintings are selected to support the creative process. Their works are introduced as a good carrier of the selected concepts – balance, continuity and domination. Then students produced successful three-dimensional architectons from them. With these experiences they noticed that they could rationalize spatial and volumetric relations of their projects maturely. At the end of the design process, students understood that they could bring together planes such a way that form a constructive composition, which depends on relative angles and proportions. They also understood that in preliminary stage, composition of planes offer constructive combinations for volumetric relations of the parts of the buildings.

In this respect, purpose of the architectural studio is helping students to improve their poor architectural ideas, to overcome lack of technical skills, to develop a sense of scale, proportion and unity in their projects for volumetric constructions, to overcome lack of rhythm and dynamism in the compositions of their designs.

References

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