



How Does Teaching Architectural History Meld into Design Education? A Quick Studio

Araştırma Makalesi
Research Article

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ABSTRACT

This study aims to reveal a design case in architectural education so that the gap between theory and practice can be reduced. For this purpose, an architectural history course and working in an architectural studio were chosen as the fundamental courses which constitute experimental area of the study. The inquiry orientation of this experimental practice is the discussion of the contributions and consequences of different perceptual methods to the teaching/learning level, as well as the provision of a variety of practices for direct learning. The method chosen was to adapt the architectural history course, which is generally based on theoretical narrative and supported by visual stimuli, for use in the architectural studio. For this purpose, the concept of style, borrowed from the architectural history course, has been turned into a useful design resource. Styles are described with the use of keywords in terms of their formal, structural, and conceptual features, and these features have been used as a design resource in the design of a new facade. Depending on the cognitive activity of each student, the study and interpretation of style have changed, which has led to differentiation in terms of design behaviors. Although such a study can impose some restrictions in terms of creative behaviors and morphological approaches, they can be eliminated by the exercise of the designer's cognitive ability. In addition, such a method has created a new experimental field involving the integration of theory and practice in architectural education by melding an architectural history course into architectural studio activities.

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Mimarlık Tarihi Öğretimi Tasarım Eğitimi ile Nasıl Bütünleşir? Hızlı Bir Stüdyo

ÖZ

Bu çalışmanın amacı, mimarlık eğitiminde teori ve pratik arasındaki uçurumu dengeleyebilecek bir tasarım araştırması sunumu gerçekleştirmektir. Bu amaçla mimarlık tarihi dersi ve mimari stüdyo, çalışmanın deneysel alanını oluşturan iki temel ders olarak seçilmiştir. Bu deneysel pratiğin araştırma yönelimi, çeşitli doğrudan öğrenme pratiklerinin koşullarının yanısıra öğretme/öğrenme düzeyine farklı algısal yöntemlerin katkısı ve sonuçlarının tartışılmasıdır. Yöntem, genellikle teorik anlatıya dayanan ve görsel uyarılarla desteklenen mimarlık tarihi dersinin, mimari stüdyoya entegrasyonunu uyarlamak üzere kurgulanmıştır. Bu amaçla, mimarlık tarihi dersinden ödünç alınan üslup kavramı, kullanışlı bir tasarım kaynağına dönüştürülmüştür. Üsluplar, biçimsel, yapısal ve kavramsal özellikleri doğrultusunda anahtar kelimelerle tariflenmiş ve bu özellikler, yeni bir cephenin tasarımında tasarım kaynağı olarak kullanılmıştır. Her bir öğrencinin zihinsel etkinliğine dayalı olarak üslubun etüt edilme ve yorumlanma biçimi değişmiş, bu da tasarım davranışlarının farklılaşmasına yol açmıştır. Dahası böyle bir yöntem, mimarlık tarihi dersinin mimari stüdyo içerisinde ergiyerek mimarlık eğitiminde teori ve pratik bütünleşmesinin yeni bir deneysel alanını yaratmıştır.

MAKALE BİLGİSİ

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ANAHTAR KELİMELELER

Mimari tasarım
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Üslup

INTRODUCTION

The relationship between theory and practice in architectural education mostly turns into an abyss in the axis of architectural history lectures. Work in architectural studios is the core of the 4-year architectural education

program under consideration and functions as a practice that is shaped mainly through the act of design, and transforming epistemological situations into a design strategy. In the architectural studio, theoretical presentation is mostly organized to serve the practical axis. More precisely, theory is integrated into the practical

design setup. Other than studio work, in the courses provided by architecture schools, the course content relies heavily on theory. This is certainly true of the history of architecture courses. The generalized form of the teaching of architectural history is a consideration of stylistic periods divided historically. In terms of its content and position, this discourse occupies an important place in the architectural education curriculum. In addition, the lecture is often conducted through a theoretical narrative. Activity formats such as PowerPoint slides and in-situ visits also accompany the lectures. In other words, architectural education is either visualized through presentations based entirely on a theoretical narrative, or expands its field of application through architectural studios that are predominantly practical. In most school programs, theory and practice are perceived as mental processes that are separate, or only need to be integrated at a later date. As the results of a survey of architecture students conducted by Pasin (2017), it would appear that in architecture schools in Turkey, there are knowledge/skills dichotomies. While design and technical knowledge such as art and design, urban planning and design, spatial planning and structural design are mostly associated with practical skills such as modeling, sketching and technical drawing, theoretical knowledge such as that related to building codes, is most often associated with mental skills such as critical thinking, and involving oral presentation.

This paper aims to offer a design case presentation that can balance the gap between theory and practice in architectural education. For this purpose, a bridge has been established between the architectural history course and the architectural studio of the Architectural Department of Sivas Cumhuriyet University. Rather than the integration of theory and practice, a method in which these aspects meld with one another has been established. The method of this melded approach is to experience the conceptions of 20th Century architectural style, borrowed from architectural history lectures, through design teaching. Given the abundance of design approaches in the 20th Century, -isms can be regarded as a metaphor for new design movements. The epistemic approach can therefore smoothly become the main thrust of the act of design. The other position, which forms the focus of this study, comes from the tools of the architectural studio that are set up on a practical basis. More precisely, design tools, strategies, principles, and principles directly serve the instrumentalization of theory.

Before moving on to the theoretical framework of the study, it is necessary to mention a similar study that addressed the integration between architectural history and architectural studio operations. In a study conducted by Hadjiyanni and Zollinger (2010), alternatives with regard to history teaching in design education were investigated through questions such as which form of history teaching would capture the student's' attention, how might history lessons appeal to young people in a way that connects the past to the present, and how might homework and exercises increase students' excitement and create interest in the subject under consideration. The research consisted of exercises such as matching games and sketching exercises that resulted in students becoming better informed about the history of design and finding

inspiration for their designs. As a result, through this pedagogical method, the aim was to increase student interest by rethinking the role of history in design education. The researchers tried to establish a relationship between history and students' lives by focusing on subjects that piqued the student's' interest (Hadjiyanni & Zollinger, 2010). Apart from this study, we are aware that activities such as large-scale modelling are included in the education process as an alternative method of teaching about the past (Salama, 2015). Indeed, despite the design-oriented pedagogical methods of 20th Century architectural education which was shaped in a very radical way, history teaching occupies a large place in the existing architectural curricula in Turkey. As a field that cannot be completely excluded from an architectural education, the history of architecture lectures tends to focus on the physical properties of buildings, the work of individual architects, or contextual content as a way of seeing the past. Yet architectural history courses should also rethink the role of integrating design education through a renewed understanding of ways of seeing the past, rather than by simply creating visual stimuli.

THEORETICAL FRAMEWORK

There are several ways of analyzing architectural education, one of which is in terms of architectural design and the other is in terms of educational method. Architectural design education is an effort to create an architectural product based on studio experience (Vandenhende, 2013). Therefore, the basic theoretical framework that makes up this study is established over several positions. The first of these is the relationship between theory and practice in architectural education. One of the most powerful models for the description of the interaction of theory and practice in architecture is exchange or interplay (Schurk, 2013). This means that the role of the designer or the student during the education process in the design studio is constantly changing. In other words, it is the re-framing of the relationship between the student's making, distorting, thinking, acting, critiquing, changing, evaluating and renewing positions during the activated design act, and the relationship between theory and practice, and transferring this to architectural design. In this context, design studios, which are the core of architectural education, are accepted as experimental environments in terms of common understanding. However, design studios cannot exist as a field of experience that is completely divorced from the curriculum. On the contrary, in the studio, the student is expected to achieve a coherent mental integration in line with the desired learning outcomes by using the knowledge, skills, and abilities gained from a consideration of the theoretical and other practical courses in the curriculum. Indeed, the design studio is not the outcome of a detailed theory separate from practice, and from the political and economic framework in which architecture is located (Vela Castillo, 2013). Thus, the design studio can be regarded as a locus of thinking and doing, reviewing and renewing knowledge, discovering and inventing, applying theory to practice in direct proportion to contextual conditions. In this context, design is an activity that needs the individual to borrow given knowledge, theories, techniques, and research

methodologies from other disciplines. The design studio can thus be described as a melting pot of different information types (Charalambous & Phocas, 2013). In addition, in this study which aims to establish a bridge between the history of architecture and the architectural studio, the former is instrumentalized in the axis of the integration of different types of information with the work of the studio. A way has been sought to integrate historical information with regard to architectural products with design in the melting pot that is the studio, and therefore to transfer the key ideas generated from historical information to current design practices.

Another position that constitutes the theoretical framework of the study is the rethinking of the position of architectural history courses as a pedagogical aspect of design education. According to Frankl (1968), the history of architecture has become a historical discipline, and a new prototype of specific styles can no longer be sought to find. The importance of architectural history stems from its being a part of humanistic science, and has led to an understanding of the associated styles in terms of their limitations and development. For a long time, architectural history studies in Turkey involve cases that have been derived by methods that identify patterns instead of interpreting them (Erkarslan Erdoğan, 2001). This has led to the development of a stable architectural history narrative as part of the educational process. However, in order to make architectural knowledge more meaningful, it is necessary to look beyond simple information, and to understand architecture as a product or a process. In this way the student can determine the quality of architecture from a historical point of view. As a matter of fact, dealing with a certain aspect in historiography entails the danger of adopting a deterministic approach (Dostoğlu, 1981). This leads to learning outcomes in architectural history courses that result in static reasoning that excludes diversity and interaction. Generally, while exploring the order or use of decorative elements, composition, and the proportions of historical buildings in history teaching, the emphasis is placed on the visual, formal, and structural features of the building. In contrast, in design education, the focus is not only on prominent historical features, but also involves a more holistic and integrated approach that includes experimental learning (Salama, 2015). At this point, it should be emphasized that while architectural theory aims to bring together the discrete procedures of design, architectural practice seeks to invent methods for creating the new (Hauberget et al., 2013). Therefore, within the scope of this study, it is necessary to transform historical information into a design strategy to allow the students to invent the new and to create a design solution in order to do so. Within the scope of this study, the setting of a design problem to do this was done by integrating the tools of architectural history into the architectural studio context. In other words, all the content presented as existing or frozen knowledge within the scope of the understanding of architecture as a product or a process, are put at the service of inventing the new in architectural practice. This tool, quoted from architectural history lectures, is an appreciation of style.

Style is a useful tool that can be used as a method of positioning structures within the context of architectural

history. In other words, style has identifiable characteristics which are more or less constant in artwork in terms of resembling the products of other artists of the period or place, and flexible in that the geographical distance varies according to certain patterns observed in samples selected from a wide period; style is a distinctive unity of these characteristics (Ackerman, 1962). This understanding that certain characteristics are the result of a common design behavior assumes that these characteristics reflect the changing world of architecture chronologically. Thus, they function as a stylistic, temporal, and spatial separator. Moreover, by characterizing certain relationships such as decoration and structure between structures, it brings design behaviors, principles, and understandings closer together or pushes them further away. This act has been adopted as a useful tool for classifying and categorizing architectural products, first in the field of art and later in related fields. Thus, beyond chronological documentation, architectural products have been included in periodic brackets. In other words, architectural history as a product has been transformed into a theoretical narrative through various historical periods, supported by visual stimuli. Periodization is a template for partitioning not only time but also place (Summit & Wallace, 2007). On the other hand, the classification of architectural history as historical periods is based on certain criteria. For example, period names are structured in terms of political-dynastic, cultural, and aesthetic types, and historical classification is a means of creating a temporal-spatial continuum that reveals important similarities and differences with regard to historical objects, and allows us to see the line of development (Schapiro, 1970). In this study, style is used as to develop an understanding of the values that reveal the distinctive design behaviors of a particular period, and characterize the architectural product. Focusing on the architectural movements of the 20th Century as a special area of interest, this study aims to highlight the distinctive features of stylistic periods that are supposed to flow in a continuous and straight line, and to reuse them in architectural design practice.

MATERIAL AND METHOD

In this study, the basic application tool in support of the research method is the notion of style in the history of architecture. Specifically, the method involves an analysis of the styles that make up 20th Century architecture and its appreciation through design. The styles of the period were crystallized with the use of keywords and aesthetized in a facade design as a quick studio application. A total of 45 fourth year architecture students were asked to engage in a design practice that lasted for 2 weeks. Accordingly, each student was expected to select three different architectural styles, analyze them, internalize them through keywords, and engage them as a design product in the areas determined by the student in an urban area. The choice of architectural movements was left to the student. The method is shaped using two basic tools based on the theoretical and practical background. The theoretical background consists of the student's internalization of 20th Century architecture, the general trends of the period, and the conceptual and visual content of prominent design behaviors or architectural movements. Conceptual

narratives are integrated with images transferred to visual memory. Thus, the student is provided not only with information about the movements that constitute 20th Century architecture, but also the visualization of the style in the form of a visual fragment. The practical content of the method is directly related to the design and is the first step in the field work. The aim of the field study is to integrate 20th Century architecture movement that the student has internalized with a design. Accordingly, the practical content of the method was the realization of a design that represents the architectural movement chosen by the student in one of three different areas and/or buildings selected for an urban area. Thus, the student does not perceive the understanding of style which is frequently used in the history of architecture as an epistemological situation, but instead, has discovered the way to appreciate the key aspects of the style as part of the act of design.

FINDINGS AND DISCUSSION

In this study, which involves design research on how a history of architecture course can meld with the operation of architectural studio, there is a basic separator that should be specified first. This consists of determining the weight of the architectural history course and that of the architectural studio within the 4-year curriculum carried out in Sivas Cumhuriyet University Architecture Department, and comparing the learning outcomes. One way of evaluating of this study, which consists of a design case presentation that aims to balance the gap between theory and practice in architectural education, consists of determinations made on the axis of the current curriculum and learning outcomes. Another way of establishing a bridge between the history of architecture and the architectural studio is the design research carried out within the scope of this study. These two research paths will ultimately provide a basis for how architectural history teaching can meld into design education.

The current curriculum of the Department of Architecture currently consists of a total of 4-year programs consisting of fall and spring semesters. The theoretical and practical courses in the curriculum constitute a total course load of 240 ACTS. Within this, while architectural studio courses create a large course load of 64 ACTS, architectural history courses constitute a course load of 9 ACTS, and other variants of architectural history (Seljuk architecture and art environment, civilization and house, 20th Century architecture, Turkish house, Turkish architecture in the Republican period, building technology in traditional housing) based on elective courses, constitute a course load of 22 ACTS. When evaluated in terms of learning outcomes, the basic justification for the architectural studio can be summarized as enabling the student to gain the ability to think in three dimensions, to learn to explore design, to realize an architectural design on an urban scale, and to learn about building materials, building elements, structural and functional expansions. The learning outcomes of the architectural history courses can be explained as the internalization of the architectural understanding of a certain period and a certain architectural period and the ability of the student to analyze these features structurally, spatially, and temporally. Therefore, in the 4-year curriculum of the Sivas

Cumhuriyet University Department of Architecture, theory and practice have taken a completely separate position. As stated with regard to the method of this study, instead of this segregated system, new design research in which the architectural studio and architectural history intertwine was constructed and applied. This has also been experienced as a brief design exercise in which the 20th Century architecture course and the work of the architectural studio were integrated.

The students participating in the study engaged in a similar design behavior in this new application. Students who preferred to use a single method in terms of their starting point carried out the act of design using the keywords of the style they chose among the 20th Century architectural movements. In this process, analogy and interpretation were used as design tools. In addition, students were asked to fill in a questionnaire explaining their style choices and their design comprehension. In the questionnaire, the student was expected to develop a narrative supported by visual stimuli about the 3 chosen styles. In addition, the students were asked the following questions:

1. Did you know about the style you chose? What are your selection criteria for the style?
2. Is studying style analysis in architecture linearly a useful approach?
3. Has the method been effective in the separation of style and understanding in architecture?
4. Do you think the facade you propose reflects the basic elements of the style you have chosen?
5. Has the method of analysis of style benefited you in terms of how to make use of the style in the facade you proposed?
6. When analyzing the style of your choice, did you analyze it in terms of the architects involved or in terms of general style?
7. Is there a building/building facade that you refer to in your new design?

In the light of the results of the above evaluation, the first student preferred to use de stijl, purism, and constructivism as evidenced in the 20th Century architectural movements in her facade design. The only aspect that played an active role in this selection was the student's special interest in styles that she has previously been exposed to. Student 1 studied the de Stijl movement through a building, the purism movement through an architect, and constructivism with regard to the general principles of style. In the new facade design, which she developed in her proposal, the Schröder house and Le Corbusier's Villa Savoye were important sources of inspiration. Accordingly, while the keywords selected by student 1 as the distinguishing feature of the style were decomposed as abstraction, right angle, restraint, primary colors, neutral colors, bounded flat surfaces, vertical and horizontal lines, gray-black-white color for, the keywords with regard to purism were breaking from the ground, light, volume, white color, long horizontal windows, and purification. The keywords relating to constructivism were internalized as strength, glass, integration, simplicity, mechanical and structural elements. Thus, student 1 identified the keywords relating to style when it came to determining the formal features and structural components of her design. This led student

1 to create a design for a new facade involving similarity between styles. The proposal put forward by student 1 was directly influenced by the sample structures that are representative of the style she chose and was differentiated in terms of keywords. For example, in the manner of the de Stijl, the proposed facade is limited to horizontal and vertical linear elements, and the area is defined in black-

white-gray colors. The aim here is encourage the student to adopt aspects of the chosen style, to internalize the key elements, and to apply these elements to a new design. Within the scope of purism and constructivism, student 1 distinguished the dominant structural components through the use of keywords, and integrated them into the new design (Figure 1).

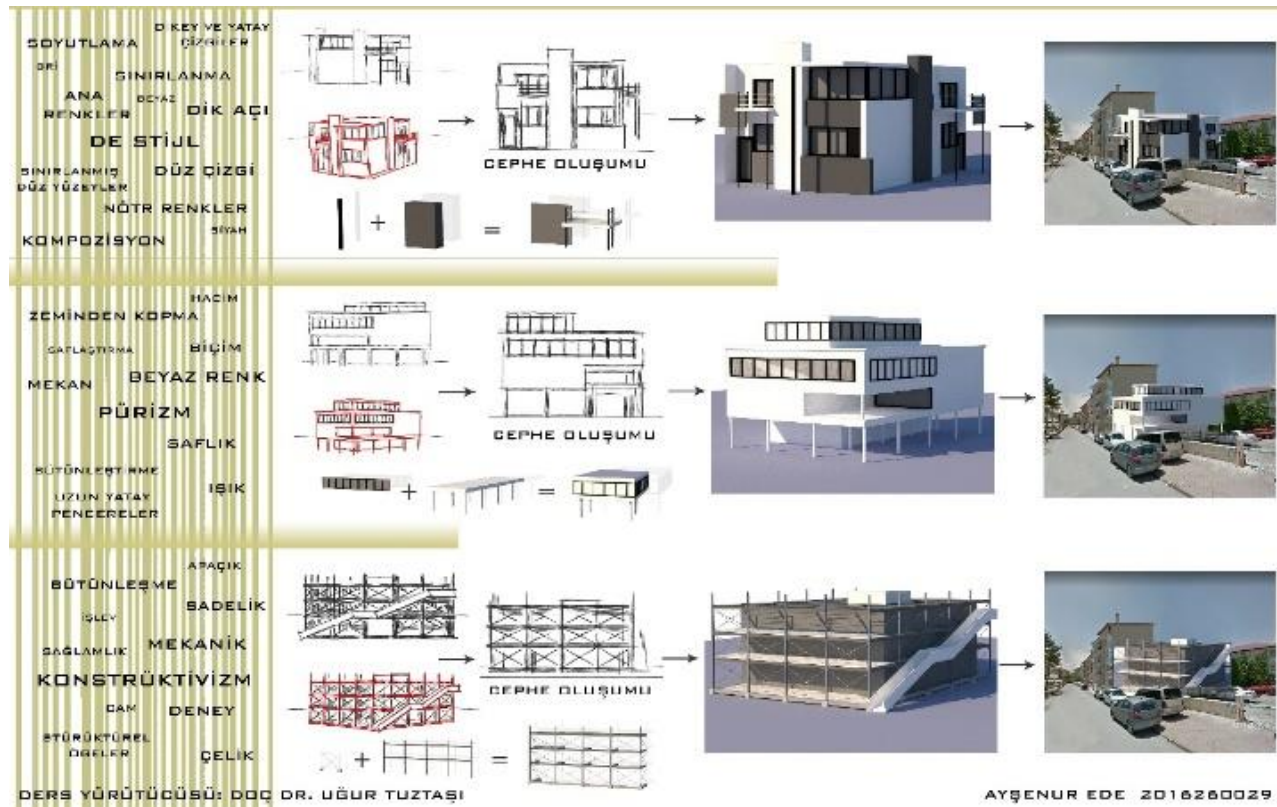


Figure 1. The re-emergence of the de Stijl, purism and constructivism movements in the facade designed by student 1.

Student 2 chose the de Stijl, futurism and Bauhaus movements among the architectural styles of the 20th Century. The criteria for choosing these styles were the use of simplicity and geometric patterns in terms of style; the use of large glass surfaces and sharp lines in terms of futurism; and the combination of simplicity and glass-metal material to reflect the Bauhaus approach. When analyzing these styles, student 2 began with a study based entirely on the general characteristics of the chosen styles. This approach led student 2 to reinterpret design resources instead of using design tools such as direct quotation and simulation. For student 2, the keywords associated with de Stijl are contrast, simplicity, geometric order, and space, while the keywords with regard to futurism were mobility, sharp lines, and triangles. Finally, Bauhaus was characterized by student 2 as wholeness, simplicity, and functionality. Thus, student 2 identified keywords belonging to style through the use of formal features and conceptual approaches. As a result, she tended to reinterpret design resources. For example, while a de Stijl facade proposal consisted of a plain surface interrupted by the use of perpendicularly intersecting rectangles and squares, a new interpretation has been developed to

represent futurism with the use of sharp lines. Student 2 remained faithful to the formal features of the style in her facade proposal developed in the Bauhaus style, and focused on the dominant elements of the movement such as the use of same sized windows (Figure 2).

Student 3 chose de Stijl, futurism, and postmodernism. Student 3 stated that his earlier works such as models and sketches played a crucial role in this choice. When analyzing these styles, student 3 did so, not through a particular building or architect, but in terms of the general characteristics of the style. By studying the general features of the style and integrating them in the form of sketches and models, student 3 adopted a method involving reinterpreting the styles in his proposal for a new facade. In the case of student 3, the keywords with regard to the de Stijl movement were straight lines, deconstructed surfaces, and contrasting colors, while the keywords relating to futurism were dynamism, mechanics, and elliptical lines, while postmodernism meant anti-modern for student 3. Thus, student 3 analyzed the keywords in terms of style mostly through conceptual expressions, with the formal-constructural-structural features being perceived as a secondary stylistic quality. This moved the

new facade proposals of student 3 beyond the limits of reinterpretation, and transformed them into proposals with extremely surprising characteristics. For example, the facade proposal in the manner of the de Stijl movement involved the use of a black-white-red colored cube, while

the facade proposal in terms of futurism was achieved by designing a cube motif in a dynamic composition relationship. Finally, student 3 designed a postmodern monument and recreated its anti-modern image (Figure 3).



Figure 2. Student 2 and facade proposals in the manner of the de Stijl, futurism, and Bauhaus movements.



Figure 3. Student 3 and proposals in the manner of the de Stijl, futurism, and postmodern movements.

Among the 20th Century architectural movements, student 4 preferred to use purism, de Stijl, and brutalism. The only feature of this selection was that the student had prior knowledge of the styles. Student 4 had studied these movements, in addition to the general features of the style, through a consideration of the prominent architects and building images associated with these styles. For student 4, one particular architect emerged as an important design resource, based on visual images of Le Corbusier buildings. Accordingly, while the keywords selected by student 4 as the distinguishing feature of the purism style took the form of plain, transparency, minimal, glass, white lines, it was the geometry of the de Stijl movement, while the colors red-yellow-blue, were determined functionally. The keywords relating to brutalism were identified as exposed concrete, cold and plain geometry. Thus, student 4 characterized the stylistic keywords through conceptual images and material-oriented metaphors, as well as formal features. This led student 4 to search for a design in which the proposal for a new facade involved a combination of

simulation and reinterpretation between styles. In the facade proposals designed by student 4, there was a design source influence in the form of the sample structures that are representative of the chosen architectural movements. For example, Le Corbusier's Maison Guiette for purism, Piet Mondrian's color composition and Gerrit Rietveld's Schröder house for de Stijl, Le Corbusier's Unite D'Habitation and Tadao Ando's Church of Light for brutalism stand out as the visual stimuli for student 4. On the other hand, this student handled these visual stimuli in the form of facade layouts by reinterpreting them in a new context. For example, the proposal for a facade in the style of purism was created by handling pure prisms in a new composition. In the manner of de Stijl the facade proposal was based on the linear separation of the arrangement of bounded surfaces with yellow-red-blue color layers. The brutalist facade proposal involved a pure prismatic mass that was plain in terms of the texture of the material used (Figure 4).

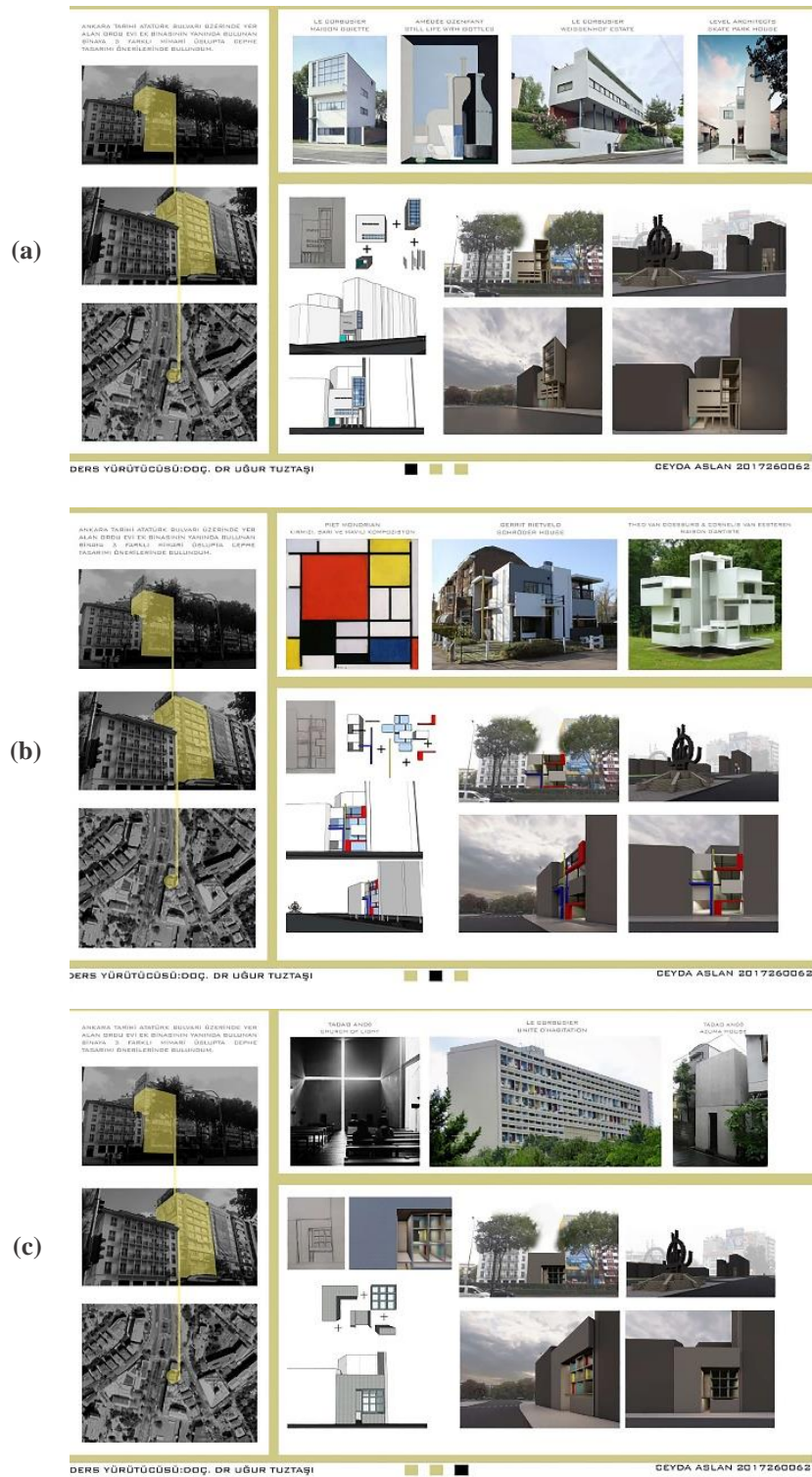


Figure 4. Student 4 and facade proposals in the manner of the purism (a), de Stijl (b), and brutalism (c) movements.

Student 5 has chosen the de Stijl, purism, and futurism movements from among the architectural styles of the 20th Century and tried to use them in his proposal for a new facade. The only criterion for selecting these movements is that the student has prior knowledge of the movements. In the case of student 5, while the de Stijl movement expressed linearity and clear form, purism identified as simplicity and universality. Futurism adopted as a futuristic and original style. Student 5 first analyzed these

movements in terms of general stylistic principles, and then used the most prominent and representative structures of the style as a source for the design. For example, Rietveld's Schröder house for de Stijl, Corbusier's Marseille residences for purism, and the UK pavilion designed by Heatherwick for futurism, stand out as the visual stimulus for student 5. In addition, the keywords selected by student 5 as the distinguishing feature of the various styles, in the case of the de Stijl style they are

neutral form, right angle, geometric, abstract, and linearity. For purism, they are plain, open, universal, detached from the ground, functional. The keywords with regard to futurism are dynamic, originality, innovation, futuristic, mechanization, and speed. Accordingly, student 5 determined the keywords belonging to these various styles mainly through formal features. Additionally, she used conceptual metaphors. Thus, this student adopted a reinterpretation approach with regard to new facade

proposals. For example, the facade proposal in the manner of de Stijl was designed with a rectangular form, using linear extensions, and involving color integration. The facade proposal in the manner of purism movement has been addressed by featuring the dominance of columns and plain windows. The proposal for a new facade in the manner of futurism made use of the concept of dynamism (Figure 5).

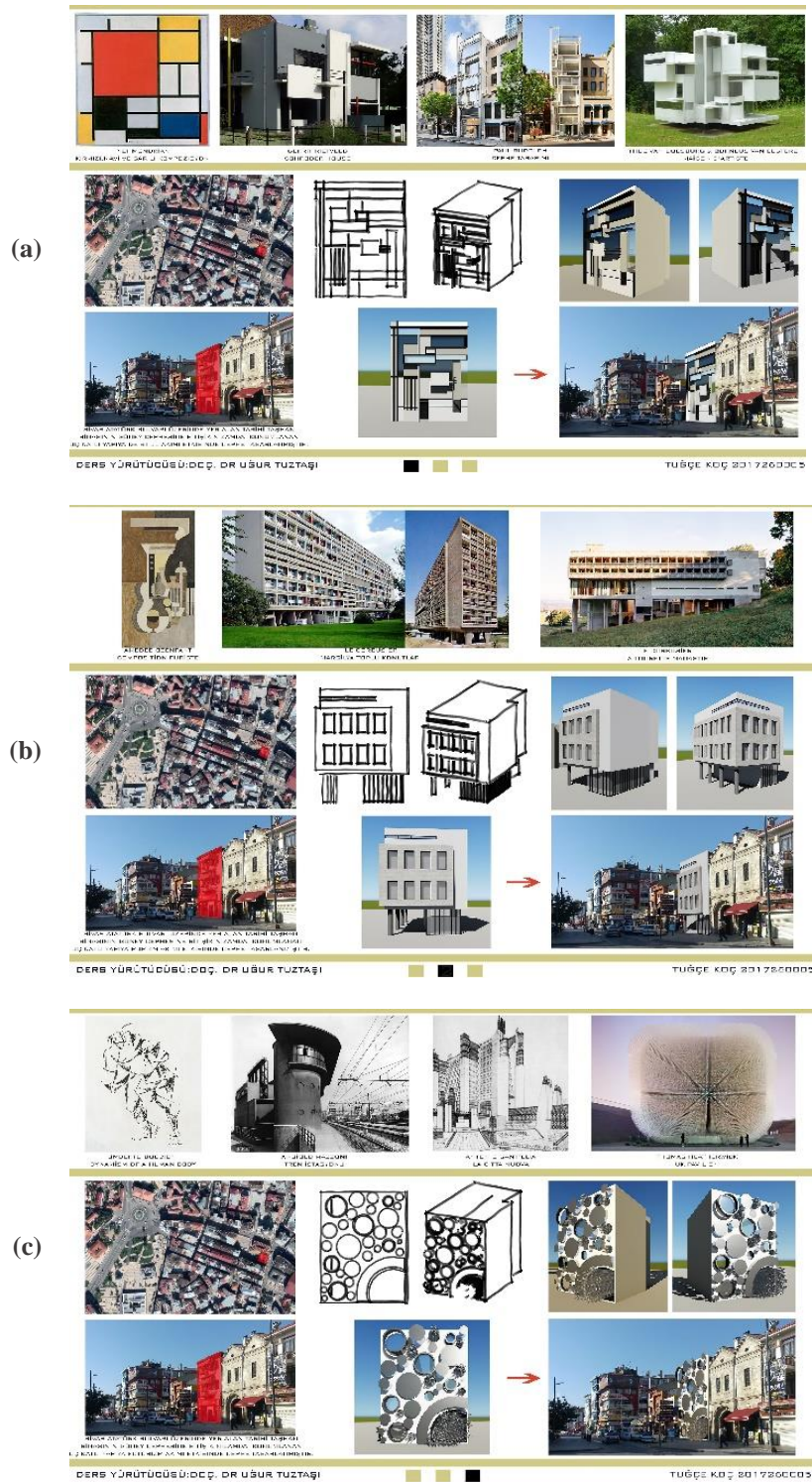


Figure 5. Student 5 and facade proposals in the manner of the de Stijl (a), purism (b), and futurism (c) movements

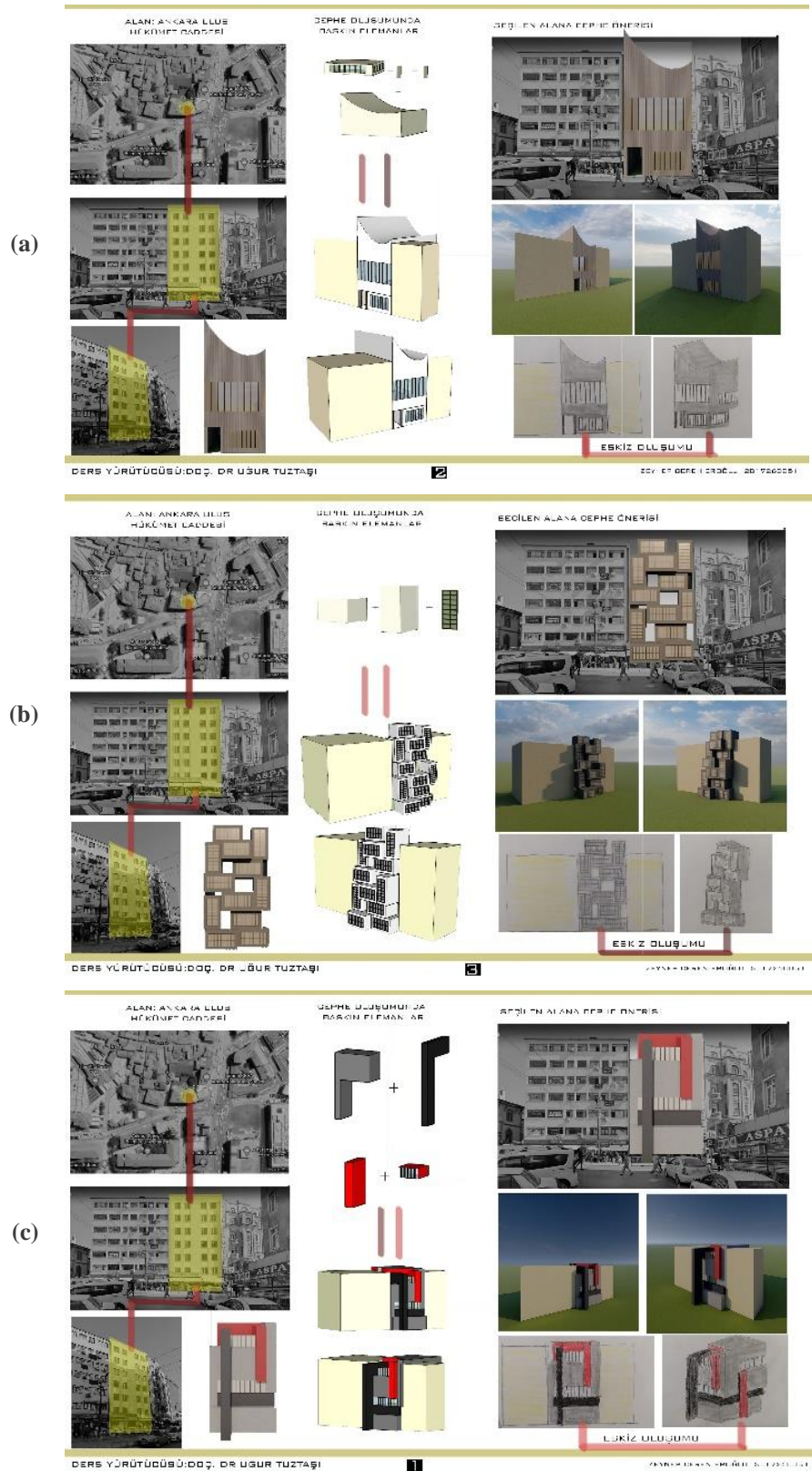


Figure 6. Student 6 and facade proposals in the manner of constructivism (a), de Stijl (b), and purism (c).

From the architectural movements of the 20th Century, student 6 chose constructivism, de Stijl, and purism. An inspiring influence that played a role in the selection of these movements was the approach of those architects who

pioneered of these styles, and the visual effects of the buildings were important. Student 6 studied the styles of the architects and their structures, and tried to use the experience gained in this analysis in the general features of

the style used in the proposed facade. As design sources, Konstantin Melnikov's Rusakov Workers Club for constructivism, Rietveld's Schröder house for de Stijl, and Corbusier's Villa Savoye for purism were taken as examples, and the prominent features of these structures were used in the proposals for the new facades. The keywords selected by student 6 as the distinguishing features of the chosen styles were described as strong form, kinetic, dynamic, structural, and skeletal for constructivism; neoplasticism, right angle, neutral colors for de Stijl. Purism, on the other hand, as expressed using keywords such as plain, pure form, white color, and rational form. Accordingly, student 6 based the keywords belonging to these styles mainly in terms of formal qualifications, and adopted a reinterpretation approach with regard to her facade proposal. For example, the facade proposal in the manner of constructivism consisted of the composition of structural components with prismatic effects, and the effect of movement between surfaces. The facade proposal in the manner of De Stijl was designed with horizontal and vertical-colored linear elements attached to a neutral facade surface. The new facade proposal in the manner of purism was completed with a plain surface and a prismatic body mass (Figure 6).

A few more points should be made with regard to the findings of the method used for analyzing the three styles selected among the 20th Century architectural movements, separating them in terms of keywords, and using them in a new facade proposal. Based on the results of the survey which revealed the style choices and design understanding of the students, they made their style choices mostly based on their special interests or prior knowledge. The most important role that was revealed was not the general characteristics of the style or the historical narrative of these features, but the representational power of the architect or building representing a particular style.

In other words, the students preferred to develop a facade proposal based on the visual stimuli and the design of the architect. In analyzing the styles according to the design case presentation, the identity of the architect and the image of the most famous structure associated with a particular style as seen in the common literature and in digital media, was adopted. For example, Le Corbusier and Villa Savoye are the first visual stimuli that come to mind when it comes to purism; in the case of de Stijl, the Schröder house has been accepted as perhaps the only representative of that style.

Another result of this study and the survey results is the difference in perception, comprehension, and application of the same style by different students. The styles have been studied in terms of their distinctive features using various keywords. This study, the aim of which was made to make the dominant elements of a style understandable, led to the creation of a keyword index describing the formal, conceptual, and structural components of a particular style through visual stimuli. This changed the method of analyzing the distinctive features of such a style for each student, and led to the diversification of the vocabulary used as a design resource. According to the

findings obtained from the questionnaire, the students mostly benefited from formal features when describing a style, and conceptual contents were used at the secondary level. For example, formal descriptions such as the purity of geometry and right angles were used more frequently than expressions such as kinetic, dynamic, and futuristic. This diversified not only the design resource but also the design approach on the part of the students. For example, student 1 described the styles she chose as a design source in terms of formal features and structural components, and realized a design approach based on a direct analogy between the facade proposal and styles. Student 2, on the other hand, studied the keywords belonging to the various styles in terms of formal features and conceptual approaches, and adopted a design approach based on reinterpretation with regard to the facade proposal. Ultimately, the design case presentation is entirely shaped by the student's cognitive activity.

CONCLUSION

The relationship between theory and practice in architectural education makes the educational curriculum extremely complicated. Within the common architectural education system, architectural history courses and architectural studios are generally perceived as separate areas. This results in the construction of an educational process in which the learning outcomes of one course cannot be transferred to another. In this study, which aims to bring together the learning outcomes of the history of architecture course and that of design research, a way to establish a bridge between theory and practice in architectural education is investigated. For this purpose, a design case was built, and the styles borrowed from architectural history courses were transformed into the design research procedure. The theory-based narrative form of the history of architecture course was melded into the work of the design studio, creating inspiration for a new facade design. The result has been that the architecture students have processed, studied, and mentally reinterpreted the theoretical aspects of architectural knowledge and included them in the act of design. As a result, thanks to the experimental nature of architectural education, both a quick design exercise was carried out, and the possibility of a reconstructed relationship between an architectural history course and the architectural studio was tested in terms of pedagogical orientation. Finally, it should be stated that such an experimental studio setup has the potential to bring a new approach to today's highly diversified pedagogical approaches, and to open new areas of discussion. The study can also be considered as a solid base for the implementation of other pedagogical methods in the future, as it provides details of an experience of rethinking and reconstructing design tools and resources on the basis of design research.

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