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# ARCHITECTURAL DESIGN EDUCATION AND THE PROBLEMATIC OF CONTEMPORARY ARCHITECTURE

#### ABSTRACT

In this paper conducts a research to discuss the problematic of contemporary architecture. It aims to determine a basis of discussion about the contemporary architecture design fields defined as conventional and unconventional; to examine the recognition, understanding, perception, and adoption levels of these fields. From the data obtained, it also develops strategies for updating the contemporary architecture environment in both the areas of education and practice. Questioning part was carried out by means of surveys, which revealed the perception, information and experience concerning a discussion about the Turkish architecture environment. Although the knowledge level of the participants regarding environmental concepts, architects and buildings was limited, the success of matching images with text and construction-oriented details was quite high. The participants of the survey were able to recognize contemporary architecture and interpret its functional and building processes, but they were unable to argue its design content in terms of unique concepts and communication languages.

**Keywords:** Conventional Architecture, Non-Conventional Architecture, Concepts of Contemporary Architecture, Architectural Communication

# MİMARİ TASARIM EĞİTİMİ VE ÇAĞDAŞ MİMARLIK SORUNSALI ÖZET

Bu çalışma, çağdaş mimarlık sorunsalını tartışmak üzere yapılan bir araştırma ve elde edilen verilere dairdir. Araştırma, çağdaş mimarlık ortamında konvansiyonel olan ve konvansiyonel olmayan olarak tanımlanan tasarımsal alanların tartışma zeminini belirlemeyi, ulusal mimarlık ortamının bu alanları bilme, anlama, kavrama, benimseme düzeylerini incelemeyi, elde edilen verilerden eğitimden pratiğe çağdaş mimarlık ortamının güncellenmesi için stratejiler geliştirmeyi, amaçlamaktadır. Sorgulama anket yoluyla gerçekleştirilmiştir. Anket sonuçları ulusal mimarlık ortamının belirlenen tartışma zeminlerine dair algı, bilgi ve deneyimini ortaya çıkarmaktadır. Ortamın kavramlar, mimarlar ve yapılarına dair bilgi düzeyi sınırlı olmasına karşın imgeler ile metinleri ve konstrüksiyona yönelik ayrıntıları eşleştirme başarısı oldukça yüksektir. Çağdaş mimarlık eserlerini tanımakta, işlev ve yapım süreçleri üzerinden yorumlamakta ancak tasarımsal içeriğini özgün kavramları ve iletişim dili ile tartışamamaktadır.

Anahtar Kelimeler: Konvansiyonel Mimarlık, Konvansiyonel Olmayan Mimarlık, Güncel Tasarım Kavramları, Mimari İletişim



#### 1. INTRODUCTION (GİRİŞ)

The agenda of architecture undergoes rapid development in parallel to technological, economic and social developments. Contemporary thinking and production of architecture, the meaning and content of design components change and transform with respect to such forms. Since the relationship of the architecture product develops with its environment, construction techniques, design processes and visual qualities result in new content and meanings. In order to adopt, follow, read, perceive, criticize and discuss this new content and meaning, the knowledge infrastructure and communication environment specific to this field must be established as a fundamental requirement for original and innovative works of architecture.

There are two fundamental fields of practice, which can be defined as the *conventional* and the *unconventional*. Between these two fields, there are terminological, procedural and formal differences. While the *conventional* discusses today's architecture with strong references from the past, the *unconventional* restructures its design content with specific concepts to form the architecture of the future.

Contemporary methods of designing, which architects develop around their works via information and images, create a positive and/or negative mobility when trying to resemble design, practice, and education environments by means of mass communication tools. However, there is no possibility for the contemporary architecture environment to become specific and updated without recognizing "knowledge and communication languages" by internalizing the design content of either the conventional or unconventional fields of architecture. In this scope, this paper explains a research that obtains data to open up the problematic of contemporary architecture to discussion.

# 2. RESEARCH SIGNIFICANCE (ÇALIŞMANIN ÖNEMİ)

The aim of the paper is to determine the basis for a discussion of the conventional and unconventional design fields in contemporary architecture, to reveal the perception, knowledge and experience of the agenda of Turkish architecture, and lastly, to develop strategies for updating the contemporary architecture environment from education to practice.

The research method consisted of two sections. In the first section, defined as reviewing, those architects who lead the contemporary architecture agenda through their theoretical and practical studies, texts, discourses and architectural pieces were reviewed. This reviewing process consisted of reading both the architects' own texts on their works (their own discourse about their own projects) and critical texts reviewing the architects' works. The selected designers and their designs were as follows:

- Coop Himmelblau, UFA Cinemas, Dresden-Germany,
- Toyo Ito, Tower of Winds, Yokohama-Japan,
- Bernard Tschumi, Glass Video Art Gallery, Groningen-Netherlands,
- Herzog & de Meuron, Eberswalde Library, Eberswalde-Germany,
- Rem Koolhaas, Seattle Public Library, Seattle-USA,
- Jean Nouvel, Cartier Foundation Building, Paris-France,
- Foreign Office Architecture, John Lewis Department Store, Leicester-UK,
- Frank Gehry, Guggenheim Museum, Bilbao-Spain,
- Han Tümertekin, B2 House, Assos-Turkey.

Simultaneously, a *list of concepts* was developed, which comprised the expansion of those design components adopted by the



architects in order to understand and express their architectural designs. The second part of the research was an *inquisition* through *survey*. This method was preferred since it is a reliable and valid method in collecting first-hand information for defining, comparing or describing approaches and behaviors.

# 3. EXPERIMENTAL METHOD-SURVEY (DENEYSEL YÖNTEM-ANKET) The objectives of the study were as follows:

- To determine the knowledge and communication languages of the contemporary architecture environment. In other words, to determine their level of adoption in the fields of knowledge constructed by the concepts and definitions of conventional and unconventional architecture;
- To determine the contribution of design and construction studios in order to question the professional and disciplinary development of the architect. In other words, to scrutinize content of architectural education and professional practice experiences, as well as the relationship of the architect between building and design concepts and the conventional and unconventional approaches;
- To collect data concerning architects' abilities to assess, associate, adopt and construct knowledge, visual quality and content with respect to other architects, other buildings and other design concepts.

Design of the Questionnaire: While the survey questions were designed as closed-ended and mixed, three kinds of content were determined as demographic, factual and judicial. In order to standardize answers and thus facilitate answering, different attitudinal scales were used such as Thurstone, Likert and semantic differential scales. Behavior scaling questions were preferred since they are quite comprehensive, reliable and definite in collecting data, enable easy comparison of data groups, and facilitates analysis by simplifying the data collection process.

## 3.1. Survey Method (Anket Yöntemi)

A questionnaire was delivered directly to responders via the Internet and e-mail. Answers were collected and assessed. Then, numerical and statistical results were illustrated by tables and similar graphical expressions.

**Structure of Survey:** The survey was comprised of three sections: Personal Data, Concepts Analysis and Design Content Analysis.

The Personal Data section aimed to define the participants. Questions concerning their architecture education and practice, how much they followed current architecture media, and their experiences outside of Turkey were asked. It was expected that these answers would categorize the participants into different time periods of careers (student, architect-in-training, experienced practicioner, etc.).

Questions 1-21 dealt specifically with design methods, expression methods, cultural and social qualities and education levels concerning conventional and unconventional architecture with respect to the recognition, perception, internalization or superficiality of current architecture which leads to the education, design and implementation fields.

Following the means of contemporary architecture might be indication of economic circumstances, which was asked in Question 4. One of the ways to reach the information and communication languages



of actual architecture is to know a foreign language, which was determined in Question 5 in terms of professional intellectual level of reading, travelling, and participating in foreign-language activities. Professional practice activities and length of practice provides clues with regards to participants' access to updated information and following current developments, which were asked in the Questions 6 and 7. There is a similar relationship between professional practice and quality of experiences abroad, asked in the Questions 9, 10 and 11.

Design tools form sub-relations of tendency and interest in the conventional and unconventional contemporary architecture fields. The questionnaire included the assessment of either field's "knowledge and communication languages" and architectural tools structuring these languages (plan, cross-section, elevation, system details) and thinking tools (images and concepts), which were asked in the 12th question. Also asked were questions about how and to what degree the architectural environment follows these communication languages (Questions 13 and 14), how often participants attend which activities (Question 15) and which publication(s) they followed and for what purpose(s) (Questions 16 and 17). Therefore, a general picture of the survey participants became evident from the differences in intellectual and formal approaches of the conventional and unconventional design fields.

The survey also inquired into the attributes of the architectural environment by means of design components such as context, program, construction, material, form, surface, and image. Such an inquisition is important for understanding architects' effort to keep themselves up-to-date and knowledgeable of contemporary architecture with information and communication languages Therefore, it is required to inquire which architects the survey participant knew and followed, how much they read, what they read, how familiar they were with a list of contemporary architects and their buildings, and their level of visiting the buildings and similar variables (18th, 19th, 20th, and 21st questions).

The second section, concept analysis, discussed awareness of conventional and unconventional architecture through concepts. The architect's liability to understand/perceive information and communication languages of both the conventional and unconventional fields is significant in terms of developing a conscious approach to contemporary architecture. Conceptual analysis is associated with the processes of architects' making, reading and assessing a design. Knowing and understanding the properties of current architecture, internalizing the thoughts concerning design methods and principal design components appear as fundamental elements in developing original architecture.

The concepts used in scrutinizing design content are the basic means of comprehending the relationship between the designer and the design components, associating the visual qualities of design with design content. It is crucial that the architect has the necessary skills to accurately use such tools. The depth of conventional and unconventional architecture is constituted by the differentiation in handling concepts. For example, "function" or "form" are adopted by both the conventional and unconventional fields. However, the meanings attributed to those concepts differentiate between the design and construction characteristics of both fields. Therefore, the content of the concepts define architecture environment and its design approaches. On the other hand, the diversities and identities of concepts specific to architecture define design contents. For instance,



while concepts such as "event" or "image" identified with the unconventional field define the characteristics related to design content of that field, the conceptual differentiation between fields becomes evident. Therefore, the levels of knowing, following, recognizing, and understanding contemporary architects and their architecture were asked in Question 22 of the survey. Thus, the importance and priority assigned to design components formed by such concepts (context, program, construction, material, form, surface, image) is revealed.

The third section, Design Content Analysis, was about the levels of understanding, interpreting and adopting the methods utilized by the architectural environment to realize architectural design. The relationship between visual qualities and design content of architectural works have especially been examined in Questions 23-69.

The questions in this section inquired into levels of knowing, reading, understanding and interpreting the design content of unconventional architecture images by means of associating images and texts. Learning the design methods of unconventional architecture occurs by knowing, recognizing and understanding the architects' definitions of such content and the constructions they develop. The contemporary architecture agenda is discussed, defined and determined by these products and constructions. Therefore, to establish and update one's background knowledge of the architectural environment, it is considered essential to know design methods, content and concepts leading the agenda of contemporary architecture.

In this context, in the third section there were nine "question groups," with five questions each. All questions are based on two images of an architectural construction-one overall image of a building and the other a construction detail. Then, questions about those images proceed from simple to complex. The first question of each group (24, 29, 34, 39, 44, 49, 54, 59 and 64) asked to identify building and the second question (25, 30, 35, 40, 45, 50, 55, 60 and 65) asked to identify its architect. The remaining three questions of each group 926-28, 31-33, 36-38, 41-43, 46-48, 51-53, 56-58, 61-63 and 66-68) inquired about the design content of the building and the conceptual approach of its architect.

The final question of the survey, Question 69, was a match with other images concerning their constructional details. The aim was to question the participants' varying knowledge levels according to their professional practice fields.

Inquiring the architectural environment by means of the knowledge of contemporary architecture and analyzing architects' knowledge levels about design content was important in terms of creating an in-depth discussion of the field. The examples chosen became a tool to understand contemporary architecture and its impact level on the Turkish architectural scene. The procedural analysis described above requires levels of knowing, comprehending, internalizing and adopting knowledge. Therefore, the speed and level of the Turkish architectural agenda seems determined by the architectural education taking place.

#### 3.2. Findings and Interpretations (Bulgular ve Tartışmalar)

**Personal Details:** The survey was completed by 350 participants, 50 of whom were selected randomly from architectural students and various professional fields.

- 38.1% of survey participants were female while 61.9% were male.
- 58.1% of the participants were 20-30 years old, 21.54% were 31-



- 40, 9.35 were 41-50, 6.54% were 51-60 and 2.44% were over 61 years of age.
- The education level of the participants was as follows: 12% student, 40.9% had an undergraduate degree, 26.2% had a post graduate degree and 20.9% had a PhD. Therefore, 79.55% of survey responders were young architects below the age of 40.
- The income levels of the participants were as follows: 18% earned 1000 Turkish Lira and below per month, 32.3% between 1000-2000 TL (lower middle class), 24% between 2000-3000 (middle class), 25.3% 3000 TL and above (upper middle class). 74.7% of participants earned below 3000 TL, and were also below the age of 40.
- 57.5% of respondents had some kind of experience outside of Turkey, with 58% of those being touristic and 42% being higher education and scientific/research activities. 35.46% of those with international experience had been abroad between 7-30 days.

Table 1 indicates one of the essential questions of the research: knowledge of a foreign language.

Table .1 Foreign Language Knowledge Levels (Tablo 1. Yabancı Dil Bilme Seviyeleri)

	English	German	Italian	Other	
Level	엉	ુ	ଖ	앙	
Beginner	2.7	56.8	62.5	25.5	
Intermediate	14.3	14.9	21.9	29.4	
Upper Intermediate	29.9	8.1	12.5	9.8	
Advanced	36.6	5.4	ı	17.6	
Upper Advanced	16.5	14.9	3.1	17.6	

- 36.6% of respondents knew an advanced level of English and 83% knew intermediate level of English. Therefore, it is evident that majority had a high ability to read and understand English sources.
- When asked about what was most important to each respondent during the design of process a building, they replied as follows: concept 41.1%, floor plan 38.6%, site plan 38.4%, model 34.3%, cross-sections 33.6%, image 27.1%, 3D model 22.6%, system detail 10.3%, and surface 10.2% (respondents were allowed to choose more than one item). Therefore, design concept appears to be effective way in establishing design content. However, in the assessments concerning contemporary architecture examples, the results reveal that such concepts are not known very well. However, floor plan, site plan, model, and cross-sections remain behind image and surface due to their importance. Hence, it might be thought that respondents care more about conceptual content than visuals despite the survey supporting the contrary.
- 88.6% of respondents follow developments in contemporary architecture from the Internet, 77.1% from publications, and 41.5% from activities, conferences and scientific meetings held by The Chamber of Architects or similar professional organizations. 56.0% of these attend activities as passive listeners and 44% actively as participants, organizers, and/or session moderators. 40.8% attend such activities if they find an opportunity, 9.9% attend once a week, 16.1% once a month, and 33.1% once a year. The results concerning domestic and foreign publication readership are indicated in Table 2.



Table 2. Publications Followed by Respondents (Tablo 2. Cevaplayıcıların İzledikleri Yayınlar)

International Publicat	ions	Turkish Publications	
Detail	33.5%	Arrademento Mimarlık	49.6%
JA	16.1%	Yapı	58.9%
El Croquis	13.6%	Mimarlık	43.6%
Architectural Review	42.4%	XXI	27.1%
Domus	18.6%	Tasarım	36.9%
Wettbewerbe Aktuell	18.6%	Arkitekt	11.9%
None of the above	6.80%	All of the above	5.90%
Other	8.5%	Other	6.4%

Publications are followed for the following reasons:

- To read interpretations concerning the published designs (67.4%)
- To glance at the images (65.7%)
- To understand the concepts discussed by the designs (56.4%)
- To look at presentation techniques (50.8%)
- To develop construction detail knowledge (47.0%)
- To find inspiration (39.4%)
- To think about the stylistic language of the construction (33.9%)
- To understand the design scheme (33.5%),
- To increase material consciousness (12.7%).

Reasons for following publications, such as "to read interpretations concerning the published designs" and "to understand the concepts discussed by the designs" could be assessed by associating the levels of respondents' English with the priorities of the publications. Therefore, it might be concluded that respondents observe and try to understand the relationship between design content and conceptual contexts when looking at images of contemporary architecture. However, the next results obtained in the survey indicate that familiarity of image-concept relationship does not always match with the objectives stated in following the magazines (Table 3).

Concepts Analysis: The respondents' levels of adopting the concepts used in scrutinizing design content in contemporary architecture are according to (first preferences): 20.4% user, 16.8% usefulness, 13.3% fluent dynamism, 8.8% balance, 8% texture. According to second preferences, these percentages became: 16.8% texture, 12.4% balance, 10.6% function, 8% usefulness, 6.2% construction. According to third preferences, these preferences became: 16.8% function, 12.4% identity, 11.5% texture, 8.8% integrity, 6.6% transparency.

Therefore, the fact that conventional architecture concepts find priority indicates that the Turkish architecture scene follows unconventional architecture, but sets its own architectural identity by means of conventional concepts. This adoption of conventional concepts conflicts with answers regarding architectural design education. As seen below in Table 4, the priority of principal design components emphasized by contemporary architecture methods to comprehend a design were ranked as: 52.5% context, 44.5% program, 41.5% form, 29.9% image, 28.7% construction, 26.4% material, 24% façade, 20.3% surface.



Table 3. Data Concerning Contemporary Architecture (Tablo 3. Güncel Mimarlık Hakkında Bilgiler)

Figure 1 Figu	re 2 Figure 3 F	igure 4 Fig	gure 5 Figu	re 6   Figure 7	Figure 8	Figure 9	
Figure 1: Ebe	rswalde Library						
Have Seen thi	s Image Before	22.7%	Know i	ts Architect	t 1	LO.4%	
Have Not Seen	Image Before	77.3%	Do not	Know Archit	tect 8	39.6%	
Figure 2, Sea	ttle Public Li	brary					
Have Seen thi	s Image Before	47.9%	Know i	ts Architect	t 2	28.3%	
Have Not Seen	Image Before	52.1%	Do not	Know Archit	tect 7	71,7%	
Figure 3, Car	tier Foundation	n Buildin	g				
Have Seen thi	s Image Before	24.4%	Know i	ts Architect	t 1	L3.1%	
Have Not Seen	Image Before	75.6%	Do not	Know Archit	tect 8	36.9%	
Figure 4, Gla	ss Video Art G	allery					
Have Seen thi	s Image Before	28.9%	Know i	ts Architect	t 1	L5.9%	
Have Not Seen	Image Before	71.1%	Do not	Know Archit	tect 8	34.1%	
Figure 5, UFA	Cinemas						
Have Seen thi	s Image Before	52.0%	Know i	ts Architect	t 2	27.0%	
Have Not Seen	Image Before	48.0%	Do not	Know Archit	tect 7	73.0%	
Figure 6, Gug	genheim Museum						
Have Seen thi	s Image Before	92.9%	Know i	ts Architect	t S	90.4%	
Have Not Seen	Image Before	7.1%	Do not	Know Archit	tect 9	9.6%	
Figure 7, John Lewis Department Store							
Have Seen thi	s Image Before	43.1%	Know i	ts Architect	t 2	22.5%	
Have Not Seen		56.9%	Do not	Know Archit	tect 7	77.5%	
Figure 8, Tow	er of Winds						
Have Seen thi	s Image Before	42.9%	Know i	ts Architect	t 2	21.6%	
Have Not Seen	Image Before	57.1%	Do not	Know Archit	tect	78.4%	
Figure 9, B2	House						
Have Seen thi	s Image Before	79.9%	Know i	ts Architect	t (	55.7%	
Have Not Seen	Image Before	20.1%	Do not	Know Archit	tect 3	34.3%	

Table 4. Preference Priority of Principal Design Components (Tablo 4.Asal Tasarım Bileşenlerinin Tercih Önceliği)

	3		
Concepts based on 1st ch	ncepts based on 1st choice		choice
Context	52.5%	Image	8.3%
Program	44.5%	Context	7%
Form	41.5%	Façade	5.9%
Image	29.9%	Surface	5.6%
Construction	28.7%	Material	5.1%
Material	26.4%	Program	4.3%
Façade	24.0%	Construction	3.3%
Surface	20.3%	Form	2.9%

When the concept of "surface" in contemporary design is associated with the respondents' level of following architectural agenda via the Internet, it was expected that surface would be a more privileged design component. However, respondents gave priority to context and program instead. This attitude shows that the respondents



were not insensitive to design content, knew why and how it should be assessed but did not care about it. They distinguished the effect of contemporary design components on the quality of architectural design. However, they might be able to repeat visual stylistic features of contemporary architecture examples ignoring the design content of the specific construction.

**Design Content:** With the data regarding foreign language knowledge, education and knowledge of contemporary architecture was taken into account, it was expected that the Turkish architectural environment strongly recognized the architects and their buildings of the research. However, as seen in Table 4, the answers did not support this result.

When respondents' levels of recognizing the images and the priorities in following contemporary designs were associated, it became clear that, despite knowing English, the respondents were not interested in the texts describing the contents of the designs. While this result was expected since that majority of the respondents (88%) were at undergraduate students with age average below 40, the observation of design images and the reading of interpretations in publications was expected to raise the level of familiarity with the buildings and their architects, but the results do not support this. It became clear that the images of the publications were reviewed more than the texts, since the levels of recognizing architects and their structures was low when compared with the respondents' foreign language knowledge and their level of following publications. In addition, it was understood that the respondents generally adopted conventional architectural concepts in terms of communication and knowledge.

Another interesting result was the high level of correctly identifying the functions of buildings, despite not having seen many of them before. For example, the rate of matching Eberswalde Technical School Library in Figure 1 with cultural building was 55.6% and the rate of matching Seattle Public Library with cultural building was 56.9%, despite the low familiarity rates (22.7% and 47.9%, respectively). The rate of matching the Cartier Foundation Building with cultural building was 10.4%. The visual properties of the building led it to be matched with office building by most respondents. In addition, the low level of recognizing Jean Nouvel as the architect (13.1%) supports this conclusion. Perceiving the building as an office indicates that popular images of contemporary architecture have made an impact on the general image-memory of the respondents. rate of matching the Glass Video Gallery with cultural building was 46.9% due to legibility of the construction. The function of the UFA Cinemas was known correctly with a rate of 56.9%. The rate of correctly identifying the function of the Guggenheim Museum in Bilbao was 87.8%, reflecting the high-profile nature of that building which has been widely-published both internationally and in Turkish publications. The identification of the function of the John Lewis Department Store was 58.0% correct, whereas for Toyo Ito's Wind Tower this result was 58.4% incorrect, possibly because it resembles a commercial building and not a cultural building. Han Tümertekin's B2 House was known 98% correctly, which can be attributed to the fact that the architect Turkish and has been widely published in Turkish magazines. Although English knowledge level of the respondents was high, evidence that they also follow Turkish publications is supported with the result that almost all of the respondents knew this building.

This analysis of matching images with function presents interesting findings concerning respondents' level of following



contemporary architecture. For example, according to Table 3, respondents knew the images more than texts related to design content, which indicates that they seem to develop content concerning images, independent of factors such as site, building, concept, or design strategy. They seem to have the ability to accurately read the image of a building and analyze the design, and read functional and similar attributes of the building by only looking at its images. This indicates a high quality of knowledge-background received throughout their education which is then saved in their memory banks. It could be concluded that respondents acquired knowledge of contemporary architecture during their education, but they do not update that knowledge after graduation. Considering the fact that 79.55% of the respondents was below the age of 40, this conclusion is supported by the fact that famous 20th-century architects Le Corbusier and Mies van der Rohe were well known at a rate of only 37.3% and 35.3%, respectively, as seen in (Table 5).

Table 5. Priority Ranking of Architects (Tablo 5. İzlenen Mimarlara Göre Öncelik Sıralaması)

	1	2	3	4	5
	୧୦	ું	olo	olo	010
Herzog & De Meuron	29.4	18.6	14.4	11.9	25.8
Bernard Tschumi	13.4	25.3	21.5	17.7	22.0
Frank Gehry	21.7	28.3	28.8	10.8	10.4
FOA (Foreign Office Architects)	16.0	18.2	19.9	14.4	31.5
Rem Koolhaas	34.4	27.2	22.6	5.1	10.8
Miles van der Rohe	35.3	23.9	22.9	10.0	8.0
Coop Himmelblau	17.5	18.0	22.4	13.7	28.4
Toyo Ito	20.8	19.7	20.2	12.0	27.3
Han Tümertekin	17.0	21.6	24.2	15.5	21.6
Le Corbusier	37.2	26.1	18.6	9.5	8.5
Zaha Hadid	31.4	28.1	18.6	11.9	10.0
Norman Foster	35.9	29.2	18.2	6.7	10.0
Archigram	11.0	17.0	26.9	18.1	26.9
Jean Nouvel	26.8	20.0	22.1	12.6	18.4

#### 4. CONCLUSION (SONUÇ)

Based on the results of the research, many different strategies are developed to update the Turkish architectural environment. One significant conclusion is that the design and construction studio environments - where architectural design education is delivered - should be updated. The research results are instructive in designing a process of thematic, contextual, methodological and pedagogical improvements to design and construction studios. The improvement of the Turkish architectural environment should start from the level of undergraduate architectural education, thereby handling the problem at its source. However, this source is cyclically fed back by the actual environment. Therefore, it is justified that up-to-date and sustainable architectural design and construction studios should be designed in parallel with the changes and transformations taking place in the professional and disciplinary field of architecture in Turkey (Sonmez, Caglar, 2010).

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- Figure 6: Frank Gehry, Guggenheim Museum Credit to author
- Figure 7: FOA, John Levis department store, Pell, B., "The Articulate Surface", Birkhauser, Basel, p.96 (2010)
- Figure 8: Toyo Ito, Wind Tower, El Croquis, 71, p.53 (1995)
- Figure 9: Han Tumertekin, B2 House, Credit to author