



SAKARYA ÜNİVERSİTESİ

# FEN BİLİMLERİ ENSTİTÜSÜ DERGİSİ

Sakarya University Journal of Science  
SAUJS

e-ISSN 2147-835X | Period Bimonthly | Founded: 1997 | Publisher Sakarya University |  
<http://www.saujs.sakarya.edu.tr/en/>

Title: Evaluation of Urban Images: The Case of Adana

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Received: 2020-08-28 16:16:16

Accepted: 2021-03-17 12:52:00.995000

Article Type: Research Article

Volume: 25

Issue: 2

Month: April

Year: 2021

Pages: 530-546

How to cite

Özlem ŞENYİĞİT, Gamze ATAY; (2021), Evaluation of Urban Images: The Case of Adana. Sakarya University Journal of Science, 25(2), 530-546, DOI:

<https://doi.org/10.16984/saufenbilder.787051>

Access link

<http://www.saujs.sakarya.edu.tr/en/pub/issue/60672/787051>

New submission to SAUJS

<https://dergipark.org.tr/en/journal/1115/submission/step/manuscript/new>

## Evaluation of Urban Images: The Case of Adana

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### Abstract

The need of people, who began to form the artificial environment while shaping nature, to understand, shape, and interact with the environment has increased with the process of visual perception-interpretation-definition. Objective information perceived from the environment creates different effects on people. Mental schemas shared by cultural group members lead to the emergence of visible patterns and orders in culture. This situation occasionally causes intersections in the visual elements, which common meanings are attributed to, in the perceptual cognition of the individuals using the physical environment. The image taking shape as a result of intersections is a formation of momentary perceptions, past experiences, and memories. From this point of view, the perception of images is not merely visual; it has sociological and historical aspects that it represents. In this context, the city of Adana, which has a multicultural history of 8000 years, hosts a wide variety of elements in terms of architectural imagery. In the study, the historical and new architectural images on the banks of the Seyhan River were interpreted by the public. In line with this objective, the data obtained by using photo archives, the statistical results obtained from surveys were analyzed in order to question the architectural image components. Within this framework, with the survey conducted of 60 people, the followings were questioned and answers were sought for the city users:

- Primary images of the city,
- The reasons that have created the images, in other words, the values that have been effective in transforming these buildings into images,
- The reasons for the differentiation of the selected historical and new images in their imagery values. The results of the statistical analyses revealed that the urban element/building that has not been utilized actively could not establish the relationship of belonging with urbanites, therefore, the building's imaginative effect has been weakened, and particularly the historical buildings that make up their traces in urban memory have been the most influential factors. In this context, the present study and similar studies in order to protect on retaining urbanites' relationship with the residential areas are considered valuable in terms of both shedding light on future studies and using them as data in the practices.

**Keywords:** Visual perception, meaning, image, Adana

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## 1. INTRODUCTION

It is becoming even more important to evaluate the effects of architecture, which form the physical, intellectual, and visual world of humans, on individuals. It is known that producing meaning in interpersonal relations, especially in communication forms including visuality, is more successful than words. For most people, visual symbols are stronger and more effective than verbal symbols [1]. Therefore, in today's world where architecture is accepted as a language transmitting meaning, the interaction of an individual with his/her environment is provided through the organic integrity between the form and meaning of the architectural product. Images formed as a result of the past experiences, perceptions, and interpretations of people undoubtedly change according to time and environment and differ according to people and groups. People adapt themselves to the new indicators brought by the period they live to a certain extent and attribute meanings to them.

With its 8000 years of multicultural history (Hittites, Persians, Ancient Greek, Cilicia, Rome, Seljuk, Ottoman), Adana hosts a wide range of elements in terms of architectural imagery. In the study, the values of the images on the banks of the Seyhan River in Adana and how they were interpreted were tried to be analyzed. Also, the following issues were questioned for the urbanites: "What are the primary images of the city?", "What are the reasons that created these images, in other words, what values had an impact on these buildings to become images?", "What are the reasons for the differentiation in the imaginative values of the selected historical and new images?". Therefore, the city's language was tried to be understood in the context of the data obtained from the images.

A total of sixty urbanites, consisting of architects who add formal and semantic values to the city and non-architects who make sense of these values, participated in this study, in which the survey technique was used to measure the urbanites' degree of being impressed by the image buildings on the riverside of the Seyhan River in

Adana, as well as their reasons. The data obtained as a result of the survey, which was also conducted to determine the factors (name value, historical value, functional value, aesthetic value, sociological value, location) causing the participants to be affected by the urban images, were evaluated with Thurstone and Mann-Whitney Technique.

## 2. CONCEPTS INCLUDED IN THE STUDY

An architectural product is a cultural object and also has a symbolic function in addition to many functions. Regardless of its value, the architectural product is included as an icon in the environment and culture stock by giving right or wrong messages. Since perceived meaning gains an expression in both cognitive and affective areas in architectural products, it is expressed as knowing, understanding, liking/disliking. In this context, meaning gains an expression not only on a plane resulting from the physical characteristics of architecture but also depending on the cognitive area capacity determined by phenomena, ideas, opinions, and impressions [2]. Accordingly, a city has a meaning beyond agglomeration or accumulation.

Yücel states that "an architectural space is not only a reality existing on its own but also a conceptual tool to be applied for comprehending its own reality" [3]. In this context, space gives information regarding the discourse of a city. Like the real meanings that we attribute to words, spaces are also the reflection of the reality visualized in the mind with the meaning that individual attributes to that space. In this context, as Rapaport also states, the question to be asked is: "*Since meanings are specific to the culture and change culturally like the environments shaping them, what does the built environment mean for residents, users, or society?*" [4].

### 2.1. The Image Concept

The word image is originated from the Latin word "image" or "imago," which means "to make something visible" [5]. According to lexical

meaning, it is defined as “what is designed in mind and long-awaited to happen”, “general view, impression”, and “reflection of an external object perceived by the sense organs in the consciousness” [6].

The environment offers certain differences and connections, and the observer selects, organizes, and makes sense of what he/she sees in the light of his/her own objectives. In this way, limiting and emphasizing what is seen forms the image [7]. In this regard, the perception of the images, which is formed by the instantaneous perceptions and experiences, is not merely visual; however, they become images due to factors such as the sociological definitions they represent, their functionalities, histories, and names.

The image was used as a key concept on subjects such as the readability, sustainability, and cognitive mapping of the city for reading the architectural product or the city by various researchers. Several study fields examine the image concept and try to analyze it. In this study, the image concept, which has been discussed in an extensive range of disciplines from literature to philosophy, from psychology to architecture, has been discussed in terms of imaginative evaluation and analysis in the city.

## 2.2. The Urban Architecture Images

The city is a heterogeneous socio-cultural structure that represents all kinds of ideas and beliefs. On the other hand, a city image is the mental reflection of an urban view resulting from these differences in the perspectives. Therefore, the perceptions about the city and the meanings attached to them differ for each urbanite. Since the image of a city has been formed over time, it does not have just an individual value, it also has historical and cultural values. It can perform this function by use of its urban image elements. Urban image elements, which make a mark on the urbanites, are signs, spaces, or regions that make sense for the urbanites. These elements, which cause mood changes and contribute to awareness, are also effective in perceiving the city.

Many architectural works have formed the characteristic lines of the cities, and they established the urban silhouette. Ensuring that the details that make up the city such as color, texture, size, occupancy, and availability ratios are perceived in a hierarchy is valuable in terms of a meaningful, identifiable, open, and readable creation for the communities living in it, as well as, gaining importance in creating a healthy environment [8]. The buildings, which are regarded as the sign element images, provide the environment with the features of being readable and understandable. Images, which have a meaning for the urbanites, facilitates understanding and perceiving the city. In this case, the city becomes an open work that can be read and interpreted by its image.

## 2.3. Urbanite's Image Acquisition

Architectural products are not only physical objects, but they also bear imaginative and semantics values. Because the object and its image are different. While the object exists independently of the viewer, the image inevitably depends on the subjective view and space of the interaction [9]. Hence, the urbanites (subject) perceives the city in line with their experiences and thoughts, and they create and have their images.

On the other hand, there may be more or fewer consistencies and similarities among the individuals included in the same cluster (such as age, education, occupation, nature, or family) as the social image. These are the common images that the majority of the residents of a city carry in their minds. Mental schemas shared by cultural group members lead to the emergence of visible patterns and orders in the culture. This situation can occur without being designed or images can be provided by creating intersections on objects by forming successful orientation in the physical environment to be established with future studies on certain visual elements with observer/user activity and perceptions.

Consequently, the city image is a picture in which the individual generalizes the external world in

his/her mind. The city image, which is used to interpret the acquired knowledge and direct the movement, is a product of instant emotions and past experiences [10]. In this context, which characteristics of urbanites and buildings in the study area have an impact and the extents of their impacts will be evaluated using data based on the assumption that the imaginative values of city image buildings show similarities and differences for the urbanites.

### 3. SCOPE AND METHOD OF THE STUDY

Architectural products and architectural discourses find an expression in the minds of city users. The buildings experienced in the study establish a bond with the intuitive and subjective reactions -*sociological meanings, functions, histories, names, aesthetic values, locations*- of the users and are expressed with imagery values. The purpose of this study is to find out people's differentiating and resembling images, to reveal their reasons and to determine the images' reason for changing depending on especially design education/knowledge (occupational difference) in the study area where different socio-cultural groups were used.

The riverside of the Seyhan River in the city of Adana, which has retained its importance in history in terms of historical, economic, sociological, etc. contexts, has been selected as the study area to conduct the experimental part of the study. In the study;

1. What are the imagery rankings of users?
2. What are the factors that were effective in turning these buildings into images? (name value, historical value, functional value, aesthetic value, sociological meaning, location)
3. What are the imagery values of the defined images and the reasons for differentiation?

were the questions whose answers were questioned through the suggested model in Figure 1.

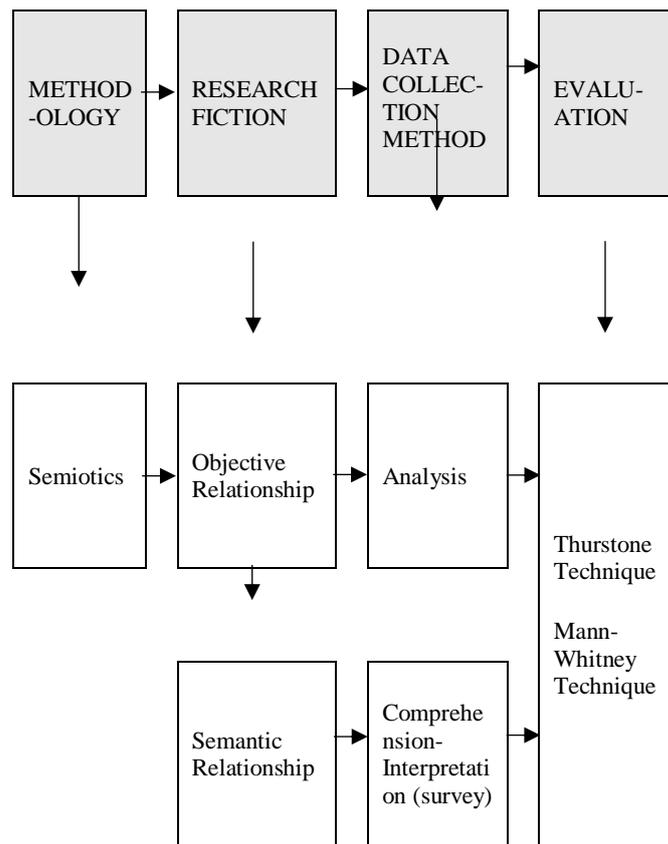


Figure 1 Subjective evaluation model of image

Based on the definition that architecture is a language and architectural product is a sign, "Semiotics" was used as the methodology in the suggested model in Figure 2 to determine the communication relationship of the images.

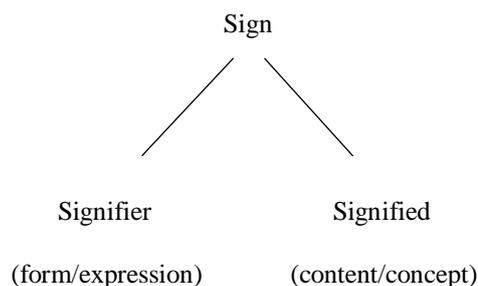


Figure 2 The most commonly used sign schema in semiotics [11]

In its shortest definition, Barthes defines semiotics as "*solving the meanings behind everything that seems ordinary and seeing the secondary meanings that they return*" [12]. According to Max Bense, signs should create the

conceptual equivalents of the particular forms they express, represent something, meet a certain function, that is, have a meaning beyond the specific form of the perceived image [13]. Figure 3 shows three elements of the sign in Peirce's understanding of semiotics: **Object** which replaces semiotics; **Medium** on which the sign is based; **Interpretant** of the sign [3].

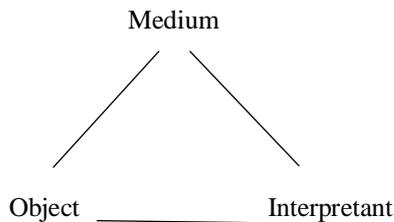


Figure 3 Three-element sign relationship [3]

In the present study, the architectural images, which are parts of the city, and the perceptual data of the users who are interacting with them are evaluated in the context of the subject-object relationship in the semiotics method. The perception of the images is not merely visual, they have the name, historical, functional, aesthetic, sociological, locational, and personal experience values that they represent. In this context, factor groups were used in the analysis of the semantic dimensions in the subjective evaluation of images to measure the emotional reactions of the user. Therefore, in the beginning, the factor groups extracted and/or used by researchers [14-19] studying on this subject were analyzed. In line with the purpose of the research, a survey study was conducted to seek answers to the questions of "What is the effective factor(s) for the building to become an image?", "What are the image values of the building?", and "Why does it differentiate from others?"

The factor groups extracted and/or used by researchers were evaluated in a preliminary test (a survey conducted with the participation of an academic group of 10 people who knew the region) to find the suitable ones for the purpose of the study. In the survey study, the factor groups that were found suitable were divided into the following six groups: *name value*, *historical value*, *functional value*, *aesthetic value*,

*sociological value*, and *location* (Figure 4). Therefore, these six factor groups, which were determined to analyze subjective evaluations on the formation of architectural imagination, were used in the survey study. Thurstone Scaling and the Mann-Whitney U Test were used to analyze the data collected by the survey study. The method of this study is shown in Figure 4.

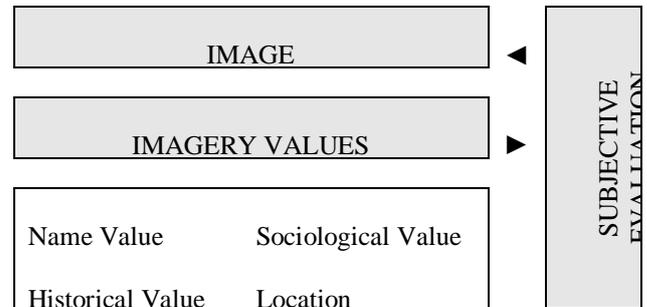


Figure 4 The method of the study

#### 4. FIELD STUDY ON THE IMAGERY VALUES OF THE BUILDINGS IN THE ADANA SEYHAN RIVER COASTAL REGION

The images chosen within the scope of the purpose and scope of the study were examined in the context of subjective evaluations of the participant groups. In the data collection phase of the study, the followings constitute the research tools;

- Image buildings determined on the bank of Adana Seyhan River,
- Survey forms where subjective evaluations will be questioned.

The process of the study is detailed in Table 1.

Table 1  
 Field study diagram

Determination of Architectural Images
▼
Determination of Observation Groups
▼
Preparation of Survey Questions to Determine Subjective Evaluations in the Context of Architectural Images
▼
Implementation of the Subjective Evaluation

▼  
Analysis and Interpretation of the Data  
\*Thurstone Technique  
\*\*Mann-Whitney Test

#### 4.1. The Study Area: Adana Seyhan River Coastal Region

Adana, which has a multicultural history of 8000 years particularly Hittites, Persians, Ancient Greek, Cilicia, Rome, Seljuk, Ottoman, hosts a wide variety of elements in terms of architectural imagery depending on its historical background, industrialization, and development process. Accordingly, Seyhan River coastal region in Figure 5, which has an imagery value historically and socio-culturally and where the residents intensely engage in shopping-recreation activities, was selected as the study area.

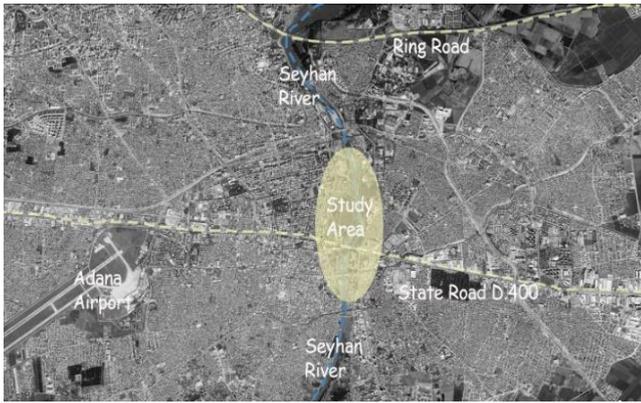
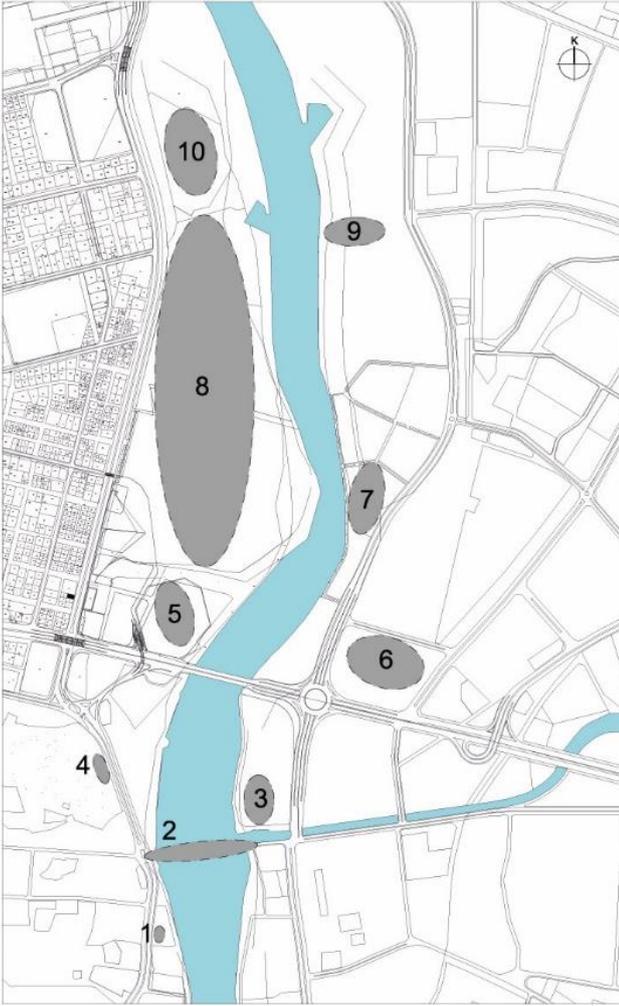


Figure 5 Location of the region on Adana map

Adana is located on the banks of Seyhan River and Seyhan Lake formed by the accumulation of this river's water. The mansions located on the riverbank were in close relationship with the river from the end of the 19th century to the beginning of the 20th century and create an impressive silhouette. However, with the filling of the riverbank in the 1950s, the silhouette of the coastline changed dramatically and the road called "Seyhan Street" was opened through the magnificent mansions and the river. As of the 1980s, the region began to lose its attraction in terms of commerce and social life. Today, the coastal region of Seyhan River, which is an important part of the city, is tried to be revived by recreation and restoration works (Figure 6).

#### 4.2. Architectural Images in the Coastal Region of Seyhan River

The image buildings that were selected from the riverside of the Seyhan River for evaluation in the study were not determined considering their functionalities and styles. They were selected because of their imaginative values (sociological meanings, functions, dates, names, aesthetic values, locations) for the urbanites in Adana. The location of the determined imagery buildings were shown in Figure 7 and Table 2 in detail. In this context, a pilot study was first conducted with a group of academicians competent in expressing their opinions on the subject to determine the buildings to be used in the study. The sample group of the study consists of the buildings which are located in the coastal region of Seyhan River and include at least three of the factors of name, history, function, aesthetics, sociological meaning, and position.



- |                           |                        |
|---------------------------|------------------------|
| 1. Girls' High School     | 6. Optimum Mall        |
| 2. Stone Bridge           | 7. Sheraton Hotel      |
| 3. Hilton Hotel           | 8. Central Park        |
| 4. Row Houses             | 9. Blue Water Aqualand |
| 5. Sabancı Central Mosque | 10. Galleria Mall      |

Figure 7 Location of the determined imagery buildings on region map



Stone Bridge, engraving belonging to the 1850s (AFAD).

The banks of Seyhan River at the beginning of the 20th century (AFAD).

The banks of the Seyhan River in 2020 [20].

Figure 6 Transformation of the Seyhan River in the historical process

Table 2  
Image buildings studied

	<b>IMAGE 1</b>   <b>Girls' High School, 1883</b>
	It was built as a Military High School during the Ottoman period and opened in 1885 as a high school. It was used as Sultan and Boys' High School and Girls' High School in 1934, respectively. In the past, it was located on the banks of the Seyhan River. Today, it is located in inner parts due to land reclamation [21]. It is the oldest educational building of the city, and it is an image-building in terms of its use as a museum today.
	<b>IMAGE 2</b>   <b>Stone Bridge, 117-138 AD</b>
	Stone Bridge belongs to the Roman period and has the title of "the oldest bridge still used in the world". 7 arches of the bridge having originally 21 arches remained under Abidin Pasha Street as a result of the filling of the riverside [22]. The building, which has survived from the Roman period to the present day, is a significant image building in terms of the city's historical value.
	<b>IMAGE 3</b>   <b>Hilton Hotel, 2001</b>
	The Hilton Hotel is one of the city's image buildings since it is the first 5-star hotel in the city. Having views of the Stone Bridge and Seyhan River, this hotel is a social center for the city with its outward-oriented functions as well as accommodation.
	<b>IMAGE 4</b>   <b>Row Houses, late 19th century-early 20th century</b>
	From the historical silhouette on the riverbank, only 5 mansions have remained. These houses which are called "Row Houses" are a row of attached dwellings and their connection with the river has been decreased due to Seyhan Street. With their successful restoration, they are significant image building examples that could convey Adana's traditional building design until today. The buildings serve different functions such as Atatürk House, Cinema Museum, Bosnian Hotel, and meet the residents of the city.
	<b>IMAGE 5</b>   <b>Sabancı Central Mosque, 1988-1998</b>
	The mosque covers a large area in terms of its location and size and is easily perceived from many areas of the city. Sabancı Central Mosque is similar to the Selimiye Mosque in Edirne in terms of its architecture and Sultan Ahmed Mosque in Istanbul in terms of its silhouette. With its feature of being the largest mosque in Turkey and the Middle East, it is an image-building as a notable place of worship and a benchmark for the urbanites.
	<b>IMAGE 6</b>   <b>Optimum Mall, 2011</b>
	Adana Optimum, which is a popular shopping mall located at the intersection of important axes on the riverside of the Seyhan River, has an imaginative value in this respect. The mall, which was positioned with the idea of transforming the region it is located in, offers a multi-choice social living space for the region.
	<b>IMAGE 7</b>   <b>Sheraton Hotel, 2014</b>
	The 5-star Sheraton Hotel has many outward-oriented functions as well as being used for accommodation. With its striking architecture that symbolizes the flow of the Seyhan River, it is an image-building that looks at the Seyhan River.
	<b>IMAGE 8</b>   <b>Central Park, 2004</b>
	The park, which is an urban-scaled recreation area, starts from the Sabancı Central Mosque on the banks of the Seyhan River and ends at Galleria. Merkez Park, which is mainly used on weekends, is an imaginative element of the city that soothes the urbanites on the riverside.
	<b>IMAGE 9</b>   <b>Blue Water Aqualand, 2006</b>
	Mavi Su Aqualand, which is an amusement park with water playgrounds, has a large area. The image, which is used by the urbanites for entertainment, is an entertainment space that hosts several activities on the water and eating and drinking spaces.

Table 2 Continue

	<b>IMAGE 10</b>	<b>Galleria Mall, 1992</b>
<p>Galleria AVM is a significant imaginative building in the urbanites' memory in terms of being the first indoor shopping center in the city. Although the mall is located on the banks of the river, it has enclosed planning that does not view the river. This mall, which has lost its popularity today, still offers service with its small shops, markets, and restaurants.</p>		

### 4.3. Participant Groups

Within the scope of the study, a group of 60 participants as architects (30 individuals) and non-architects (30 individuals) was formed in order to make subjective evaluations of urban images. The purpose is to determine whether receiving design education creates awareness of imagery evaluation.

The survey questions were answered through a one-to-one interview in the Chamber of Architects Adana Branch for the group consisting of architects and in the study area for the group consisting of non-architects.

### 4.4. Approach to Survey Design and Preparation of Question Form

Within the scope of the study, how the subjective evaluation of the selected imagery buildings in the region was perceived by the users was questioned through the survey technique. The questions designed for the survey were collected in 3 groups:

1. Group Questions: Obtaining demographic information (Demographic data except for the occupational status was not used in this study.),
2. Group Questions: Ranking images,
3. Group Questions: Determining the factors that enable imagery.

In the context of these questions, the participants were asked to sort the 10 imagery buildings according to their preferences and then evaluate the images and indicate the characteristics for which they chose those images.

Microsoft Office Excel and SPSS programs were used for statistical evaluation and the data obtained through the Thurstone and Mann-Whitney techniques (regressions, correlations, line and radar graphs, factor analyses) were evaluated. Through the data obtained from the survey results, preference rankings of the images, frequency analyses, and hypothesis tests were performed. The elements which have a significant relationship between the two observer groups were determined and the differences between the two groups were revealed with the Mann-Whitney U test. In this way, the preference and perception level and image value of each building were determined depending on user groups.

### 4.5. Analysis and Interpretation of Data

The survey data obtained within the scope of the study were evaluated based on the Thurstone scale/technique. Thurstone's comparative evaluation technique is a method developed by the psychologist Louis L. Thurstone in 1927 and used to analyze the data of paired comparison and ranking decisions [23]. In order to evaluate the imagery effect of the buildings subjectively, 10 imagery buildings were selected in the study area and the observation groups were asked to rank these images in order of importance (1 'More preferred' and 10 'Less preferred'). As can be seen from the Table 3, the data were analyzed in five phases by using Thurstone's comparative evaluation technique.

Table 3  
 V steps in Thurstone technique

<b>1- Ranking Data Table</b> Tabulating survey data for analysis.
▼
<b>2- Structure of Frequency Matrix (F)</b> Determining the frequency of the preference of an image more than other images.
▼
<b>3- Construction of Proportioning Matrix (P)</b> Converting the frequency matrix value to % values in this study.
▼
<b>4- Construction of the Normal Deviation Matrix (N)</b> Converting the proportion matrix values to Z values by using the standard total distribution table.
▼
<b>5- Creating the Score Table</b> Ranking of the Z values through total, mean, and absoluteness of the least mean value and forming the score table through the mean value points.

#### 4.3.1. Ranking Urban Images (Thurstone Technique)

The architectural value ranking of the architect participants was determined as follows: "**Stone Bridge**" was on the first rank, "**Row Houses, Girls' High School, Central Park, Sheraton Hotel, Sabancı Central Mosque, Hilton Hotel, Optimum Mall and Galleria Mall**" followed it, respectively. According to Table 4 and Figure 8, the least preferred urban image was "**Aqualand**".

The architectural value ranking of the non-architect participants was determined as follows: "**Stone Bridge**" was on the first rank, "**Girls' High School, Sabancı Central Mosque, Row Houses, Sheraton Hotel, Central Park, Hilton Hotel, Optimum Mall and Aqualand**" followed it, respectively. According to Table 4 and Figure 8, the least preferred urban image was "**Galleria Mall**".

Table 4  
 Average Z+ min value table of urban images

	Urban Images	Scores
For Architect	Stone Bridge	4,125
	Row Houses	2,391
	Girls' High School	2,241
	Central Park	1,054
	Sheraton Hotel	0,925
	Sabancı Central Mosque	0,791
	Hilton Hotel	0,783
	Optimum Mall	0,572
	Galleria Mall	0,213
	Blue Water Aqualand	0,000
For Non-Architects	Urban Images	Scores
	Stone Bridge	2,460
	Girls' High School	1,581
	Sabancı Central Mosque	1,575
	Row Houses	1,451
	Sheraton Hotel	1,149
	Central Park	1,149
	Hilton Hotel	0,763
	Optimum Mall	0,475
	Blue Water Aqualand	0,343
Galleria Mall	0,000	

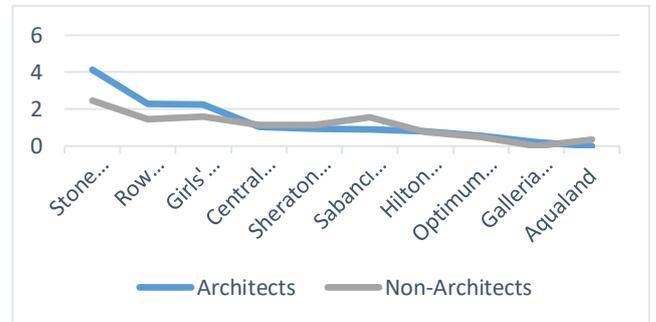


Figure 8 Comparison of ranking preferences and scores of the participants

According to the data, the historical Stone Bridge on the Seyhan River was chosen as the 1<sup>st</sup> urban image by both participant groups. The weakest urban image was chosen as "Galleria Mall" and "Aquapark".

On the other hand, the ranking preferences of the two groups show great similarity in general. In both groups, historical imagery buildings are on the first ranks. However, there are semantic differences in preference ranking in Sabancı Central Mosque. For non-architects, the mosque is on the third rank even though it is not a historical image (Table 4). Besides, while Merkez Park comes the fourth according to architects in terms of its imaginative value, it is in the sixth place according to non-architects; thus, it causes a semantic difference between the groups.

### 4.3.2. Factor Analyses of The Urban Images

In the study, in order to question the imagery values of the buildings, the participant groups were asked what is and/or what are the imagery values of the buildings. As a result of the survey conducted, factor analysis of imagery value judgments of the participant groups was performed in Table 5.

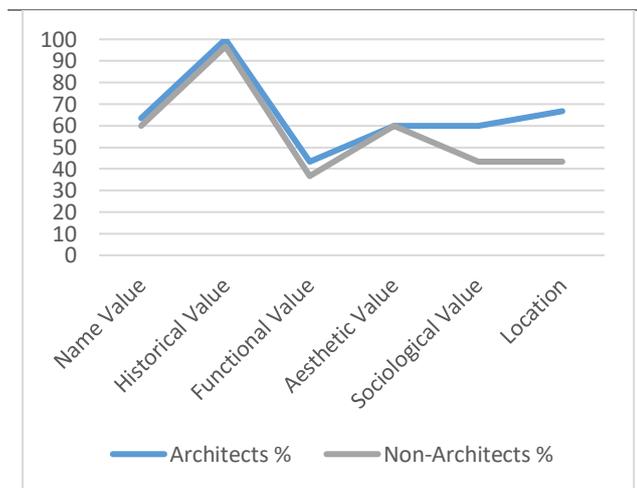
Table 5  
 Factor Analysis of imagery value judgments of participant groups

			Imagery Values					
			Name Value	Historical Value	Functional Value	Aesthetic Value	Sociological Value	Location
Girls' High School	Architects	n	17	27	11	12	10	10
		%	56,7	90	36,7	40	33,3	33,3
	Non-Architects	n	12	28	8	12	12	4
		%	40,0	<b>93,3</b>	26,7	40,0	40,0	13,3
Stone Bridge	Architects	n	19	30	13	18	18	20
		%	63,3	<b>100,0</b>	43,3	60,0	60,0	66,7
	Non-Architects	n	18	29	11	18	13	13
		%	60,0	<b>96,7</b>	36,7	60,0	43,3	43,3
Hilton Hotel	Architects	n	15	0	15	1	2	18
		%	50,0	0,0	50,0	3,3	6,7	60,0
	Non-Architects	n	21	0	16	7	3	5
		%	70,0	0,0	53,3	23,3	10,0	16,7
Row Houses	Architects	n	5	28	7	21	13	10
		%	16,7	<b>93,3</b>	23,3	70	43,3	33,3
	Non-Architects	n	5	30	2	18	11	5
		%	16,7	<b>100</b>	6,7	60	36,7	16,7
Central Mosque	Architects	n	12	3	16	5	10	15
		%	40,0	10,0	53,3	16,7	33,3	50,0
	Non-Architects	n	14	7	20	11	17	13
		%	46,7	23,3	66,7	36,7	56,7	43,3
Optimum Mall	Architects	n	7	0	22	3	9	9
		%	23,3	0,0	73,3	10,0	30,0	30,0
	Non-Architects	n	8	0	20	5	2	6
		%	26,7	0,0	66,7	16,7	6,7	20,0
Sheraton Hotel	Architects	n	17	0	19	17	5	16
		%	56,7	0,0	63,3	56,7	16,7	53,3
	Non-Architects	n	18	0	16	18	1	9
		%	60,0	0,0	53,3	60,0	3,3	30,0
		n	4	0	23	4	11	21

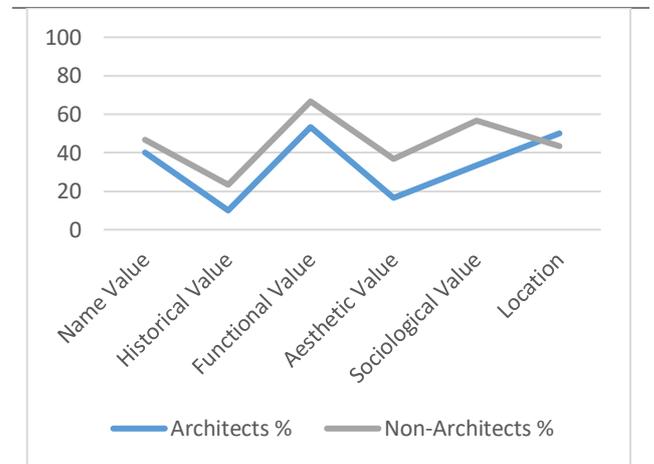
Central Park	Architects	%	13,3	0,0	76,7	13,3	36,7	70,0
	Non-Architects	n	7	1	21	21	7	16
		%	23,3	3,3	70,0	70,0	23,3	53,3
Aqualand	Architects	n	2	1	16	3	4	8
		%	6,7	3,3	53,3	10,0	13,3	26,7
	Non-Architects	n	4	0	17	2	4	6
%		13,3	0,0	56,7	6,7	13,3	20,0	
Galleria Mall	Architects	n	6	0	9	3	2	14
		%	20,0	0,0	30,0	10,0	6,7	46,7
	Non-Architects	n	8	0	9	0	3	11
%		26,7	0,0	30,0	0,0	10,0	36,7	
Average			0,38	0,32	0,47	0,37	0,24	0,29
Standard Deviation			0,487	0,466	0,50	0,485	0,43	0,456

As a result of the survey data, factor analyses of the imagery buildings on the first four ranks of the participants were evaluated in Table 6 in detail.

Table 6  
 Comparative analysis of participants' imagery value judgments



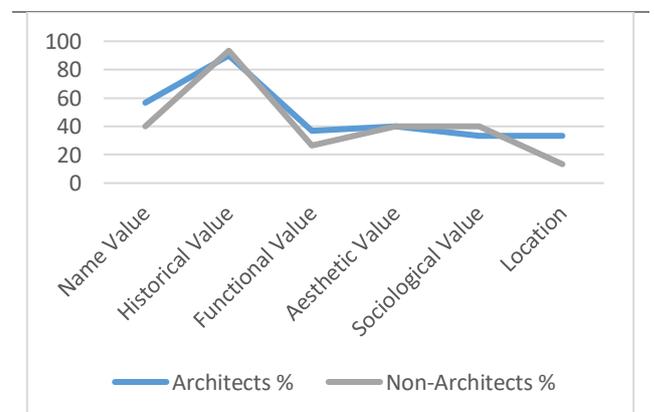
The Stone Bridge has the highest imagery value in terms of historical value according to both participant groups. The architects made the highest evaluation for the Stone Bridge in all defined imagery values.



For the Central Mosque, both participant groups give priority to the functional value.

Furthermore, the location is another important factor for architects while the sociological meaning for non-architects.

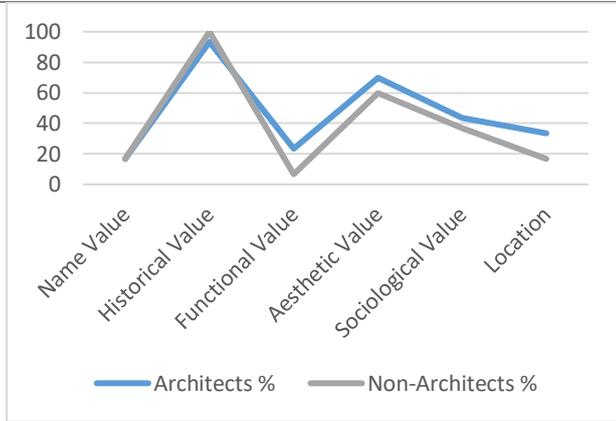
The fact that the image building has a low profile in terms of its name, functionality, and location is due to its low or no frequency of being experienced/used.



For Girls' High School, the historical value was given priority for both participant groups. In addition, for

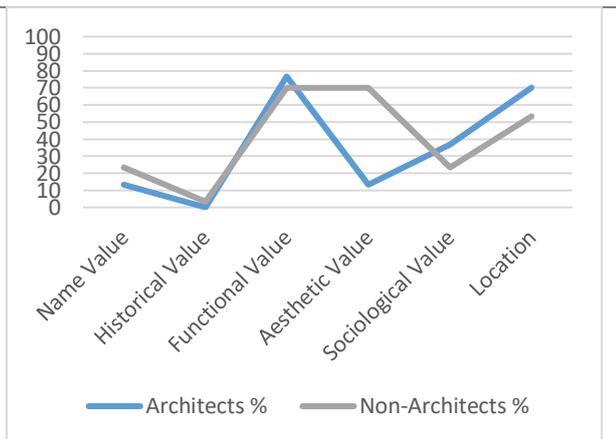
architects, the name value of the building is a significant factor.

According to participants from the non-architect group, the building's functional and locational values are the least important factors due to the scarcity of experiencing the building.



For Row Houses, first the historical value, then the aesthetic value was determined as important factors in imagery preference ranking.

There are semantic differences between the groups of architects and non-architects in terms of aesthetics features.



Merkez Park has been defined as the top architectural image in terms of its functional and locational values by both participant groups.

There was a significant difference between the groups of architects and non-architects in terms of aesthetic value.

Hilton, Sheraton, and Optimum Mall, Central Park, and Aqualand are imagery buildings that have a high value in terms of functional value. The name values of Hilton and Sheraton hotels come to the forefront and the aesthetic value of Sheraton is seen as an important factor.

On the other hand, while Aqualand, which is the last preferred in the ranking, has a functionally

significant value, there is no prominent factor in imagery value judgments in Galleria Mall.

#### 4.3.3. Comparison of Participant Groups (Mann-Whitney Technique)

This method, which is also known as the Mann-Whitney U test, is used to test the differences between two independent groups measured continuously [24]. This test was used to examine/question whether there was a difference between imagery perceptions/interpretations of the architect and non-architect participant groups. The results of test is given Table 7.

Table 7  
Mann-Whitney test results

	Z	Significance	Explanation
Name	-,932	,351	Acceptance
Historical	-,531	,596	Acceptance
Functional	-,898	,369	Acceptance
Aesthetic	-2,196	,028	Rejection
Sociological	-1,021	,307	Acceptance
Location	-4,450	,000	Rejection

As a result of the analysis, in the cases that the probability value (p) is less than or equal to 0.05, the result is statistically significant. Accordingly, it is possible to state that there is a statistically significant difference between the evaluations of the two groups regarding image-related **aesthetics and location**.

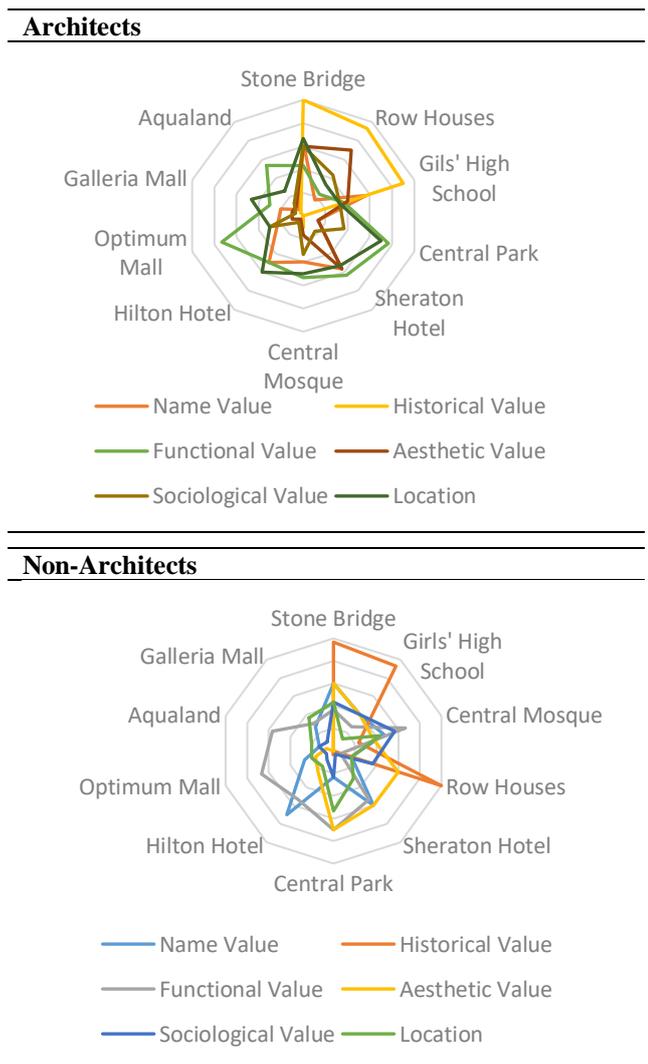
From this point of view, depending on the observation groups, the buildings having significant differences related to **aesthetic value** are; **Central Park, Hilton Hotel, and Central Mosque**. While non-architects find these buildings aesthetic, the aesthetic value of these buildings is very low for architects (Table 5).

In **Hilton Hotel, Girls' High School, and Row Houses**, there are significant differences in terms of **location** depending on observation groups. While the architects give importance to the location of these buildings, location is the last factor as imagery value judgment for the non-architects.

Moreover, there are evaluation differences between the groups in terms of **"sociological"** for Optimum Mall and **"functional"** for the Sheraton Hotel.

Analysis of architects' and non-architects' imagery value judgments are given in Table 8. While the architects gave priority to functionality, historical value, and location, the non-architect participant group determined functionality, historical value, and name value as the primary factors. In this context, while the recognition of the building is related to its function and history for the non-architect participants, the architects attach more importance to the functional and historical values as well as the location of the building in the city.

Table 8  
 Analysis of participants' imagery value judgments



Architect and non-architect urban users associate the image with its functional value. This situation is observed particularly in Optimum, Central Park, Hilton, Sheraton, and Central Mosque. In this context, it can be stated that both participant groups have common values in terms of functional values except for the historical buildings.

It is seen that the most powerful criterion in the imagery preference of urban users is the historical value. On the other hand, while the historical buildings in the study area are found to be aesthetic, the functional value of these buildings is thought to be weak due to the fact that they are not used by the city users.

Although both groups have common values for historical buildings in terms of their aesthetic values, only the group of non-architects attaches high importance to Merkez Mosque and Merkez Park in terms of their aesthetic values. This case suggests that the functional values and cultural codes have an impact on creating imaginative values for the group of non-architect urbanites.

## 5. CONCLUSION

In the use of the physical environment, people's perceptual cognition intersects in visual elements, which common meanings are attributed to, albeit different reasons. What reveals the consensus among urban planners/designers/architects/groups, who desire to form an environment to be used by many people, is to engage in such images.

Especially in the cities whose historical background dates back to old times, the urban change accelerated by globalization has brought to the agenda whether the architectural symbols of the cities protect their meanings and whether the images related to the city have changed. For this purpose, in order to ensure continuity in the city, it is necessary to get to the root of the repertoire of concepts and images that have been formed for centuries.

Every architectural form contains a definition, meaning, and interpretation regarding human life. For this reason, it is one of the reliable witnesses of the period to which it belongs. Buildings convey information about that society. The buildings on the banks of Adana Seyhan River, whose historical background dates back to old times and whose cultural continuity should be ensured in this context, were examined and their imagery values were revealed. As a result of the study conducted;

Since the concept of belonging is not formed between the user and urban building that is not actively and functionally used, its imagery effect is weakened. The traces of the historical buildings in urban memory are the most important factors forming the imagery value. However, the functionality weakness of historical buildings causes the location and name value of buildings to remain in the background. In this context, the following conclusions were obtained in the study:

- The images coming from the past should be protected for the continuity of the urban memory,
- The images functionally weakened or changed within the urban texture should be revived,
- In order to ensure urban integrity, the right steps should be taken at the urban scale in order to provide the coexistence of the past and present images.
- Urban planners/designers should read the city from the perspective of society's sociological and cultural values and they should create contemporary imaginative values in this context,
- An in-depth analysis should be made on the difference between the city planners and urbanites in terms of the imaginative values about the past and present architectural images,
- In particular, functional values should be strengthened to enable urbanites to establish strong links with the architectural images,
- It has been concluded that correct steps should be taken on the city-scale of Adana to ensure

urban integrity, and thus the unity of the past and present images.

To retain the urbanites' sense of belonging to the residential areas, to ensure the continuity of the city, and also to ensure that urban planners can read the expectations of the urbanites, the present study, and similar studies are considered valuable both in terms of shedding light on future studies and being used as data in practices.

### ***Funding***

The authors received any financial support for the research, authorship or publication of this study.

### ***The Declaration of Conflict of Interest/ Common Interest***

No conflict of interest or common interest has been declared by the authors.

### ***Authors' Contribution***

All authors have contributed to the theory and the writing of the article, collection and evaluation of data equally.

### ***The Declaration of Ethics Committee Approval***

The authors declare that this document does not require an ethics committee approval or any special permission.

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The authors of the paper declare that they comply with the scientific, ethical and quotation rules of SAUJS in all processes of the article and that they do not make any falsification on the data collected. In addition, they declare that Sakarya University Journal of Science and its editorial board have no responsibility for any ethical violations that may be encountered, and that this study has not been evaluated in any academic publication environment other than Sakarya University Journal of Science.

## REFERENCES

- [1] N. B. Winters, "Architecture is Elementary: Visual Thinking Through Architectural Concepts," Gibbs M. Smith. Inc., 1986.
- [2] S. Aydın, "Mimarlıkta Estetik Değerler," Birinci Baskı, İ.T.Ü. Mimarlık Fakültesi, pp. 4, 9, 6, 28-29, 71-73, 1993.
- [3] A. Yücel, "Mimarlıkta Biçim Ve Mekânın Dilsel Yorumu Üzerine," İ.T.Ü. Mimarlık Fakültesi, pp. VIII, 3-4, 8, 75, 79, 86, 92, 96-97, 100, 102, 116-117, 129, 136-137, 154, 1981.
- [4] A. Rapoport, "The Meaning Of The Built Environment: A Nonverbal Communication Approach," Sage Publications, pp. 9-24, 1982.
- [5] J. A. Cuddon, "Imagery, Dictionary of Literary Terms and Literary Theory", Penguin Books, pp. 413, 1999.
- [6] Türk Dil Kurumu Sözlüğü, 2020. [Online]. Available: <https://sozluk.gov.tr/>. [Accessed:03-July-2020].
- [7] K. Lynch, "The Image Of The City," Massachusetts Institute Of Technology, pp. 157-158, 1975.
- [8] A. Köksal, "Anlamanın Sınırı," Arkeoloji ve Sanat Yayınları, 2009.
- [9] R. Burnet, "İmgeler Nasıl Düşünür?," (Çev: Güçsal Pular), 2. baskı, Metis Yayınları, pp. 336, 2007.
- [10] K. Lynch, "Kent İmgesi," İrem Başaran (Çev.), Türkiye İş Bankası Yayınları, 2017.
- [11] F. Erkman, "Göstergebilimine Giriş," Alan, pp. 31, 63, 70-72, 1987.
- [12] R. Barthes, "Göstergebilim İlkeleri," Berke Vardar, Mehmet Rifat (Çev.), Kültür Bakanlığı Yayınları, pp. 89, 337, 1979.
- [13] V. Özek, "Mimarlıkta Gösterge Ve Simge Eşik Analizinin Belirlenmesi," Karadeniz Gazetecilik Ve Matbaacılık A.Ş. pp. 3, 63, 1980.
- [14] J. A. Russell, "Environmental Aesthetics, Theory, Research and Applications," Jack L. Nasar (Ed.), Affective Appraisals of Environments, pp. 122-123, Cambridge University, 1988.
- [15] J. V. Kasmir, "Environmental Aesthetics, Theory, Research and Applications," Jack L. Nasar (Ed.), The Development of a Usable Lexicon of Environmental Descriptors, pp. 153-155, Cambridge University, 1988.
- [16] R. G. Hershberger, "Environmental Aesthetics, Theory, Research and Applications," Jack L. Nasar (Ed.), A Study Of Meaning And Architecture, pp. 180, Cambridge University, 1988.
- [17] R. Küller, "A Semantic Test for Use in Cross-Cultural Studies," Man-Environment Systems, 9 (4-5), 253, 1979.
- [18] M. Krampen "Psychology and The Built Environment," David Canter & Lee Terence (Ed.), A Possible Analogy Between (Psycho-Linguistic and Architectural Measurement- The Type- Token Ratio (TTR), pp. 87-95, New York: Architectural, 1974.
- [19] H. Sanoff, "Designing For Human Behavior: Architecture and the Behavioral Sciences," Jon Lang (Ed.), Measuring Attributes Of The Visual Environment, University of Pennsylvania, 1974.
- [20] H. Tanak, "Adana aerial cityscape," Shutterstock.com, <https://www.shutterstock.com/video/clip-1018310188-adana-aerial-city-scape-sabancı-central-mosque> [Accessed:23-April-2020].

- [21] G. Ramazanoğlu, “Adana’da Tarih Tarihte Adana,” (2. Baskı). Etik, pp. 216-217, 2012.
- [22] S. H. Uygur, “Tarihi, Adana The Center of Çukurova with Historical, Touristic places and City Tissue,” (1. Baskı). Koza Kültür Sanat turizm Hizmetleri A.Ş., pp. 22, 2003.
- [23] T. G. Vavra, “Improving Your Measurement of Customer Satisfaction,” ASQ Quality, 1997.
- [24] Ş. Kalaycı, “SPSS Uygulamalı Çok Değişkenli İstatistik Teknikleri,” (6. Baskı), Asil, pp. 99-101, 2014.