THE RELATIONSHIP BETWEEN CHILDREN'S ART LEARNING AND THE SPATIAL CHARACTERISTICS OF ART MUSEUMS

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ABSTRACT

THE RELATIONSHIP BETWEEN CHILDREN'S ART LEARNING AND THE SPATIAL CHARACTERISTICS OF ART MUSEUMS

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In cities, museums are cultural places where people can make contact with the arts through the diverse opportunities provided there. These opportunities vary based on the museums' administrative and spatial characteristics. This thesis focuses on the spatial characteristics of museums to reveal their contributions to children's learning of arts. In general, children who are stuck in specific places within their cities primarily have opportunities to learn about art at school, where formal learning takes place. Informal learning, on the other hand, occurs in places other than schools and in different stages of daily life. Thus, there are more informal opportunities to learn about any particular topic at any given time in comparison to formal opportunities. Children need to benefit from more diverse opportunities to improve their limited knowledge of the arts. It is important to support children's knowledge of the arts through informal learning settings. That is why this thesis focuses on museums, emphasizing their importance in terms of being cultural and informal learning environments for contributing to children's knowledge of the arts through their spatial characteristics, and it explains the relationship between children and museums by focusing on the contribution of museum settings and their specific spatial characteristics to children's knowledge of art and culture. It is inferred that

the spatial characteristics of indoor and outdoor settings of art museums provide opportunities for children's learning of art and culture by means of the impacts of these characteristics on components of affective state and art parameters.

Keywords: Museum Settings, Learning Environment, Children's Perception of Place, Children's Learning of Arts, Environmental Psychology

ÖZ

SANAT MÜZESİ MEKAN ÖZELLİKLERİNİN ÇOCUKLARIN SANAT ÖĞRENİMİ İLE İLİŞKİSİ

Güney, Berin
Yüksek Lisans, Kensel Tasarım, Şehir Bölge Planlama
Tez Yöneticisi: Prof. Dr. Anlı Ataöv Demirkan

Ağustos 2023, 202 sayfa

Çocuklar, şehirlerin konut ve eğitim gibi başlıca mekanlarında yüzyıllardır sıkışmışlardır (Bilgin, 1984). Bundan dolayı, çocukların başka şehir mekanlarında bulunmaya ve bu mekanlardan yararlanmaya ihtiyaçları vardır.

Müzeler, insanların farklı fırsatlar aracılığıyla Sanat ile bağ kurmasını sağlayan şehirli kültürel mekanlarıdır. Bu fırsatlar, müzenin yönetimsel ve mekansal özelliklerine göre değişiklik göstermektedir. Bu tezde, müzelerin mekansal özelliklerinin çocukların Sanat öğrenimine olan katkısına odaklanılmıştır. Çocuklar Sanat öğrenimini genellikle okullar aracılığıyla öğrenmektedir. İnformel öğrenme okul dışındaki başka mekanlarda ve günlük yaşam içerisinde gerçekleşmektedir. Bundan dolayı, informel öğrenmede formel öğrenmeye göre daha çok öğrenim fırsatları bulunur. Çocukların bu fırsatlara erişmeye ve kısıtlanmış Sanat bilgilerini geliştirmeye ihtiyaçları vardır. İnformel öğrenmenin bu konuda rolü oldukça önem kazanmaktadır. Bundan dolayı, bu tezde informel öğrenme ortamları olarak müzelere odaklanılmış ve bu özelliklerin çocukların Sanat kültürüne olan katkısının açıklanması amaçlanmıştır. İç ve dış sanat müzesi mekanlarının ve mekan

özelliklerinin çocukların duygusal ihtiyaç ve sanat parametrelerini etkileyerek sanat öğrenimini desteklediği sonucuna ulaşılmıştır.

Anahtar Kelimeler: Müze Ortamları, Öğrenim Ortamları, Çocukların Mekan Algısı, Çocukların Sanat Öğrenimi, Çevre Psikolojisi.

To my nephew, and

to the children who lost their lives or families to the earthquakes in Türkiye in 2023…

ACKNOWLEDGMENTS

I wish to express my deepest gratitude to my supervisor, Prof. Dr. Anlı Ataöv Demirkan, for her valuable guidance and criticism throughout this research. I would also like to thank Sema Meydan, instructor at CerÇocuk Art Studio, and Zeynep Karaboğa, assistant at CerÇocuk Art Studio, for their valuable help and suggestions.

I give big thanks to my sweet mother, father, brother, and the other precious members of my beautiful family for their infinite love, respect, support, dedication, and existence. I will never forget your support throughout this process as you have always supported me and been with me. I am the luckiest person to have you as my family. I would also like to give special thanks to my sweet nephew, my little "motivation man." Thank you for your big support with your little heart. You, your drawings, and your support made my study colorful and more beautiful. I would also like to give thanks to my grandmother and grandfather who brought me up affectionately and loved education.

I would like to express my deepest condolences to the people who lost their families due to the devastating earthquakes in Türkiye in 2023. As a person who loves children very much, I want to dedicate this study to those children who lost their lives or families in the earthquakes. I want to commemorate them and all others who lost their lives in the earthquakes together with the memory of our great leader, Mustafa Kemal Atatürk, and his brothers in arms.

I hope that in both my own beautiful country and the world as a whole, there will always be beautiful places where people live happily together and children develop themselves in many different ways, make memories, and remain in touch with the arts. I wish for all children to be happy.

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LIST OF ABBREVIATIONS

ABBREVIATIONS

TDK: *Türk Dil Kurumu* (Turkish Language Association)

ICOM: International Council of Museums

CSO: *Cumhurbaşkanlığı Senfoni Orkestrası* (Presidential Symphony Orchestra)

CHAPTER 1

INTRODUCTION

Museums are important cultural spaces of cities. They are known as places of protection, collection, exhibition, and interaction within diverse fields such as history, the arts, and science. Ásványi, Fehér, and Jászberényi (2021) state that these places should provide possibilities for people to become involved and to learn because there are shifts in the needs of people visiting museums. The facilities at museums play important roles in enhancing the knowledge of people. For example, workshops, design markets, and galleries provide opportunities for people to test and improve their insight and knowledge. These museum facilities may be located indoors or outdoors. From a general perspective, museums play a role of providing cultural milieux both indoors and outdoors. This thesis aims to explain the particular effects of museum settings on children's learning of art. Children's knowledge of art and culture should be supported with the contributions of museum settings and the physical environment can play significant roles in this regard. Therefore, the spatial characteristics of museum settings are the focus of this study's efforts to evaluate the effects of such settings on children's learning of art. From this point of departure, this thesis explores the effects of museum settings on children's learning of art with the aim of revealing children's perceptions of the attributes of museum settings and the relationships between those perceived attributes and learning.

1.1 Problem Statement

This study argues that children are isolated within urban spaces (Ataöv & Haider, 2006, p. 128). Children are largely controlled at school and at home, which impacts their perceptions and usage of public space in a negative way (Ataöv & Peker, 2020, p. 22). Moreover, as Bilgin (1984) states, there is generally no integration of

children's spaces and the broader city. However, urban spaces can be designed in a way that allows children to be a part of them. Artistic activities taking place in urban spaces are particularly attractive for children. Orhan (2021) explains that artistic activities in public spaces have positive effects on the interactions between people and the environment. Therefore, it is important to provide such activities in urban spaces to develop children's knowledge of and engagement in art and culture through the characteristics of spatial design, allowing children to further develop strong relationships with places in their cities. This thesis is based on the fact that children lack spatial opportunities through which they can develop a cultural relationship with the arts. San (2020) states that systems of education limit creativity around the world. Therefore, there is a need to support children's creativity, which is a vital trigger of art, by means of learning environments that provide opportunities to contribute to the learning of art beyond formal school settings. Children, as the focus of this thesis, have opportunities to actively participate in alternative learning environments in children's museums (Atacı, 2020). In this way, schools are not the only places to provide learning opportunities for children. Museums are among the cultural places of cities and they offer opportunities for learning. Atacı (2020) emphasizes that the educational role of museums is becoming more obvious over time. Similarly, Karadeniz (2010) states that there has been an increase in the level of consideration given to museums' educational aspects. Accordingly, in museums, children can find more opportunities for learning about the arts and establish strong relations with different places in their cities.

1.2 Gaps in the Knowledge

This thesis focuses on the relationships between children and the spatial attributes of their physical environments. Physical environments consist of both open and built-up spaces. Thus, it is important to elaborate on the spatial components of indoor and outdoor settings. Furthermore, various human components also have effects on these relationships. Gaps in the knowledge can be identified according to both of these

types of components. Holst et al. (2020) defend the need for sophisticated consideration of the backgrounds of children and the places where they play, which are defined by both formal and informal types. Thus, they argue, research should consider different types of play and focus on the diversity of forms and parameters of art. Peker and Ataöv (2019) state that there is a particular lack of studies based on the design of outdoor spaces with the aim of understanding their effects on learning. A wholistic perspective is needed for the evaluation of the impacts of indoor and outdoor settings in terms of both formal and informal spaces for the learning of art. Moreover, Holst et al. (2020) contend that there is a need to explain children's development with consideration of their emotions in attempts to evaluate the built environment's impacts on children. In a similar vein, Robinson et al. (2022) state that there is a lack of information regarding the emotional development of children in comparison to research on physical development. Human components have effects on place perceptions and emotions play an important role in that process. This thesis aims to fill this gap in the literature by focusing on learning in terms of emotions and exploring children's learning of art and culture in the settings of CerModern in terms of their emotional needs. The effects of the built environment on children are considered in this work according to the human components of the children and the spatial components of formal and informal learning spaces.

1.3 Aim of the Study

This thesis aims to identify the contributions of children's perceptions of the characteristics of museum settings to their learning of art. To do so, it responds to the following three research questions:

(i) What is the meaning of art for children?

(ii) How do children perceive the indoor and outdoor settings of museums as learning environments for art and culture?

(iii) Do indoor and outdoor museum settings as perceived by children explain children's learning of art?

Addressing how the indoor and outdoor settings of museums contribute to children's learning of art is the main aim of this study. To achieve that aim, the first research question addresses the importance of art for children. It is important to consider the role of art in their lives and the formation of their understandings of art and culture before beginning the examination of the effects of museum settings on their learning of art and culture. The second and third questions address the indoor and outdoor settings of museums, children's perceptions of them, and their impacts on children's learning of art and culture. To understand the relationship between museum settings and the learning of art and culture, it is important to consider children's perceptions of these settings. Therefore, this thesis attempts to identify the relationship between how children perceive the characteristics of museum settings and their learning of art and culture.

1.4 Assumptions of the Study

This thesis is built upon three basic assumptions. According to the first assumption, art is a way to allow children to express their feelings, accumulated knowledge, and ideas. In a similar vein, art can be evaluated as the tangible result or concrete outcome of learning about art and culture. Thus, art is assumed to be a tool that makes contributions to children's learning of art and culture in this thesis. The second assumption is that children's perceptions of museum settings will differ due to different variables such as the design characteristics of the museum, the children's pre-existing knowledge of art and culture, and the children's personal interests. It is assumed that child-friendly museum settings have design characteristics that prioritize children's physical, mental, and cultural attributes. The third assumption is that museum settings can affect children's learning of art and culture.

1.5 Structure of the Study

This thesis focuses on three main subjects, which are place and its spatial characteristics, the learning of art, and museums, as outlined in this introductory chapter. The second chapter discusses the relationship between children and diverse spatial characteristics by focusing on the concept of the perception of place and interactions between children and the spatial characteristics of places, and it highlights the relationships between children and urban space. The third chapter elaborates on the concept of learning, art, and museums from an educational perspective. The fourth one provides the site analysis of the study site. The fifth chapter presents the case study of this thesis while the sixth offers discussions of the conclusions that are drawn, recommendations based on the case study, and ideas for further research.

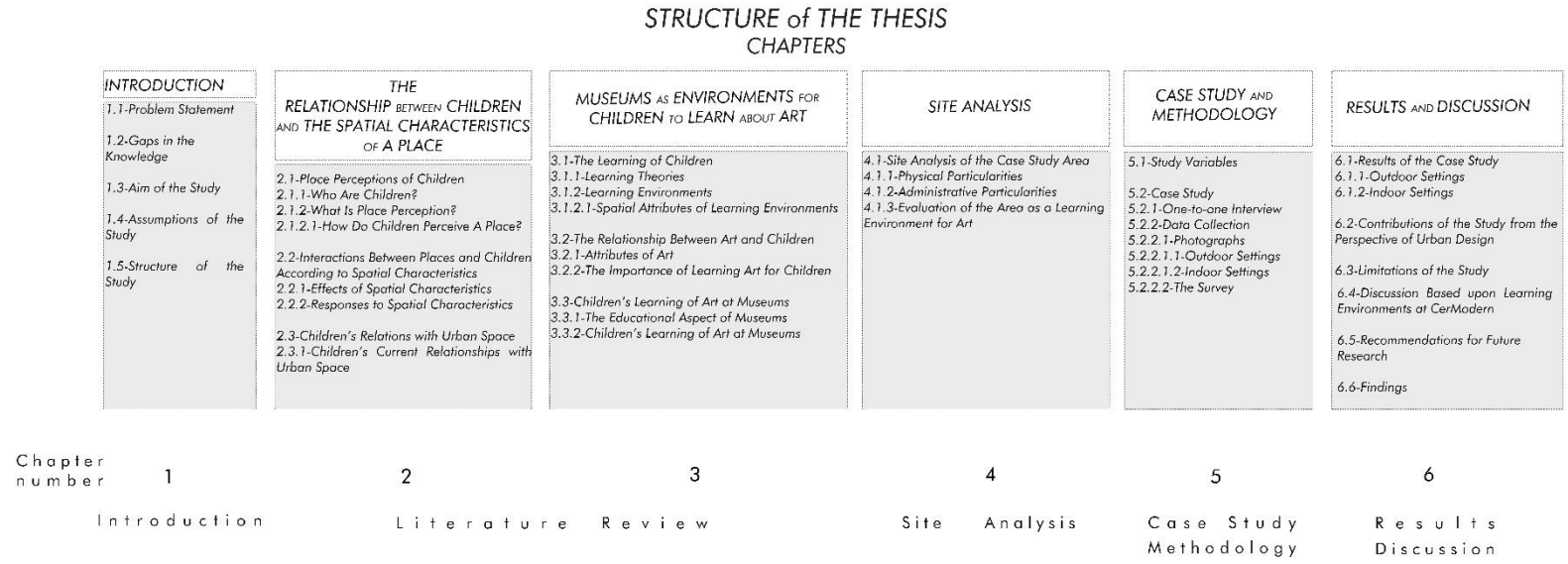


Figure 1.1. Structure of the thesis.

The first chapter of this thesis is the introduction. It explains the problems at the center of this study as well as the assumptions and aim of the study. The second and third chapters present the relevant literature review. Specifically, the second chapter elaborates on the relationship between children and the spatial characteristics of a place by focusing on the concept of perceptions of place. This chapter touches on the field of environmental psychology. Another topic explained in the second chapter is the role of the spatial characteristics of a place and their effects on people. The current relationship between urban space and children is the final point addressed in the second chapter. In the third chapter, the concept of learning is the main topic. Learning theories, learning environments, and the spatial characteristics of learning environments are the initial points of interest for this chapter. The learning of art is the second main topic that this chapter focuses on. After these chapters devoted to a review of the relevant literature, the fourth chapter presents the details about the study site, by the spatial analysis and analysis of its administrative particularities and learning environments of art and culture. The fifth chapter presents the variables defined through the literature review directed the methodology of this study at the fifth chapter that focuses on the details of case study such as participations and questions of the survey. It also gives information regarding the details of the case study. The results obtained from the case study are presented in the sixth chapter of the thesis. This chapter explains the contributions of the study to the field of urban design. Moreover, there are some limitations to the work presented here, which are also described in the sixth chapter. Recommendations for future research and suggestions based on the study site are other topics of the final chapter. The final topic of this chapter explains the findings based upon the research questions of the thesis.

CHAPTER 2

THE RELATIONSHIP BETWEEN CHILDREN AND THE SPATIAL CHARACTERISTICS OF A PLACE

This chapter presents findings from a literature review conducted with a focus on the human aspects of place, which include perceptions of place and the effects of a place's spatial characteristics. It particularly focuses on the relationship between urban space and children. Perception is a subcomponent of environmental psychology, which elaborates on the relationships between people and their surrounding environments. Mert (2019) states that giving importance to the function, aesthetics, and form of architecture kept people's interactions with places in the background, and this, in turn, harmed the relationships between people and the design of the environment. Adopting a psychological perspective in design makes places more suitable for the needs of the people (Mert, 2019). In a similar vein, Zeyrek Çepehan and Güller (2020) explain that the consideration of a place's users as active participants due to the place's social and cultural aspects became more prominent and the needs of these users gained importance in the 1960s. That is why children's attributes, ranging from psychological to affective components, and their interactions with places are the main focal points of this chapter. Ataöv and Peker (2020) state that children achieve learning outcomes to the extent that their basic needs are met. For this reason, it is important to acquire prior knowledge about the needs of users and other components of the people to understand their interactions with a place and, in turn, the effects of that place. Moreover, the responses given by children are important for evaluating the effects and, in turn, the contributions of a place. Accordingly, this is another topic addressed in this chapter to provide background information for discussions of the effects of spatial characteristics on children.

2.1 Place Perceptions of Children

In order to understand children's relations with a place, it is important to consider their attributes because the attributes of the individuals perceiving a place affect their perceptions of that place and the relationships between them and the place. Place perception is a vital component shaping human relationships with places. Each child perceives places and their spatial characteristics and forms relationships with them according to the factors of the general relations between humans and places.

There are similarities and differences among the attributes of children. For instance, children of the same age have many common needs. Another example is related to place perception, as children perceive their surrounding environments in accordance with their cognitive development. In other words, the diversity among the attributes of children influences their perceptions of places. This should be taken into consideration while evaluating place perception and the perceived characteristics of a given place, as well as the subsequent effects of the perceived characteristics on the children. This study emphasizes the relationships between children and places. Thus, it is necessary to consider children and their attributes in more detail.

2.1.1 Who Are Children?

Ataöv and Peker (2020) state that today's children have capabilities for rapidly understanding technology, creativity, the willingness to compete, motor skills, informal learning skills, and consumption habits. They list curiosity, joy, creativity, and free expression as the main triggers for children, which contribute to their learning of aesthetics. In order to discuss children's perceptions of place from a wholistic perspective, the major attributes of children should be considered. Zeyrek Çepehan and Güller (2020) note that healthy nutrition, proper shelter conditions, and hygiene and care are the basic needs of children, but trust, belonging, and play are also among their basic needs (Ataöv & Peker, 2020). Children are sensitive to the environment because of the fact that they need to be together with familiar people in

familiar places where they have a feeling of trust (Ataöv & Peker, 2020). They move constantly due to their curiosity for discovering and learning new things (Zeyrek Çepehan & Güller, 2020). Environments that are full of surprises and open to being explored help children satisfy their curiosity, which is one of the key attributes of children in the twenty-first century (Ataöv & Peker, 2020). Thus, curiosity and the habit of inquiring are important components of childhood.

Play is another basic need and it is also a significant method for learning. In a similar vein, Kalkanlı (2019) explains that play improves the learning and development processes of children. Considering the role of place in play in children's lives, it is clear that children prefer places where they have fun, and it is furthermore argued that play is the main activity of children (Ataöv & Peker, 2020). There should be opportunities that support their needs and allow them to play, subsequently generating positive effects such as the ability to enjoy and learn. As stated by Ataöv and Peker (2020): "It becomes a prior subject that understanding the needs, and triggers of the children, the ones forming the future, and providing places making children develop themselves, use their capacities through opportunities, and places" (p. 35).

2.1.2 What Is Place Perception?

Adıgüzel Özbek and Ertürk (2017) explain that a place becomes a place when life occurs there, and body movement and senses play important roles in this. The use of senses is important for perception, and perception is also the first step of experience (Şimşek, 2018). Experience is related to development and, in turn, to learning, which is one of the focal points of this study. Thus, perception is important for learning. From another perspective, the perception of a place is a considerable step in forming relations with one's surrounding environment. In this study, the concepts of place, setting, and environment are evaluated as perceived attributes. According to the Turkish Language Association (TDK), "place" has different meanings including home or the environment in which a person is located. Zeyrek Çepehan and Güller

(2020) state that “place” is a phenomenon consisting of physical, social, and cultural components. Similarly, Yücel Coşar (2017) defines an architectural place as a part of space that fulfills physiological, psychological, and social needs for humans. In a similar vein, Çolpan Erkan (1996) defends that environment comprises physical and behavioral components. Thus, both of the physical and behavioral components form an environment.

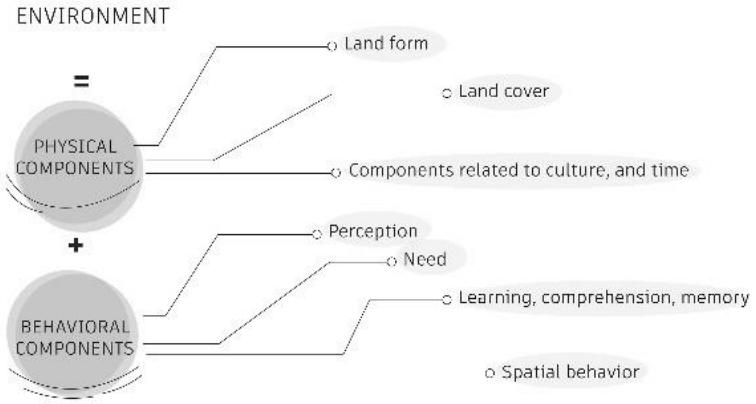


Figure 2.1. Environment’s physical and social components, adapted from Çolpan Erkan (1996).

A place hosts the diverse social interactions of people by means of different activities. People are social entities perceiving, behaving, feeling, thinking, and interacting with other people and their surrounding environments. Thus, they have important roles in sustaining the social aspects of a place. Depending on the variations in the physical, social, and cultural characteristics of a place, the relationships between people and the environment undergo changes accordingly. Adıgüzel Özbek and Ertürk (2017) state that humans and places make each other exist. For example, to ensure that all people have the opportunity to be involved in activities taking place in a square, accessibility should be taken into consideration. This will engage the attention of people, encourage them to visit this place, and make the square an attraction point of the city. In this way, the place becomes a vital place in the city. If cultural activities are being held there, people use their senses and

perceive effectively, building strong relationships with the place, being affected by those relationships, and, in turn, developing cultural insight and knowledge. Moreover, people compose society. Adıgüzel Özbek and Ertürk (2017) state that experiences of a place emerge within a society. Based on this, a place should have impacts on people to enhance their knowledge and the knowledge of the society as a whole. Therefore, there is a dynamic, reciprocal, and complementary relationship between people and the environment.

The movements, perceptions, and continuity of people are important for them as they "live" in a place (Adıgüzel Özbek & Ertürk, 2017, p. 81). According to Adıgüzel Özbek and Ertürk (2019), the body is the basis of the relationship between people and the environment as the body is the receiver of the information about a place from the senses. Çolpan Erkan (1996) states that perception is applied to obtain information from an environment while cognition is applied to evaluate that information. People move, smell, taste, see, and think through their senses. Similarly, Şimşek (2018) states that the body becomes a tool for communicating with the world. Değirmenci, Bulut, and Kuzey (2020) explain that movement provides perception. As people move, their ways of using their senses and thus their perceptions differ. The body and movement are therefore factors of perception. Çolpan Erkan (1996) states that there are many factors affecting relationships between people and the environment, such as the human scale or physical and behavioral components of the environment. Environmental attributes also have effects on the behaviors of people. Furthermore, behaviors occur to fulfill needs; according to Çolpan Erkan (1996), spatial behaviors are reactions to collected information.

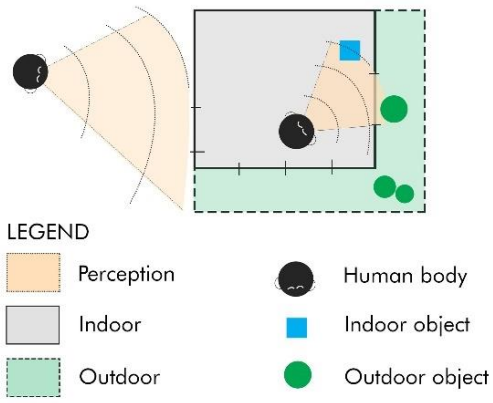


Figure 2.2. Perception of a place.

Sümer (2020) states that, according to Gestalt principles, people perceive the environment as a whole. Thus, the perception of an object occurs together with that of another object. Figure 2.2 illustrates how people see outdoor objects through the openness of built-up space. Thus, spatial characteristics have impacts on the use of senses and subsequently perception. From the perspective of urban and architectural design, there are significant attributes affecting the perception of a place (Çolpan Erkan, 1996). For instance, legibility is a factor of perception. Lynch (1960) argues that the definition of the environment is an important feature of living beings, and in defining their environments, they benefit from "tips" such as color, movement, or smell (p. 3). Lynch further states that legible environments have positive impacts on people's experiences, noting the role of uncertainties and surprises, which make reference to the whole environment, as values of that environment. A place can exist on any scale, such as a room, neighborhood, or city. Thus, there are many components of a given place waiting to be perceived. Adıgüzel Özbek and Ertürk (2017) describe places as corners to be discovered. In a similar vein, Lynch (1960) states that there are scenes waiting to be explored in cities in any case.

There are also impacts on people's perceptions arising from factors other than the spatial components of a place. Human components have influences on place perception. For example, people see differently depending on their eyesight, age, and

height. Çolpan Erkan (1996) states that measurements, size, and height are related to human dimensions, and compatibility with the human scale gives people a sense of belonging to a place; thus, this scale is often applied by people. Differences in compatibility have psychological impacts on people. For instance, Çolpan Erkan (1996) argues that people feel limited and anxious in smaller places while they have feelings of respect in larger ones. She also explains that a place includes much information that cannot be fully received by a person due to the fact that people receive environmental information or, in other words, perceive places in line with their aims. In a similar vein, Sümer (2020) states that the body defines the world based on aims. Due to their concentration on achieving their aims, people direct their bodies to do the same. For instance, art exhibitions will come into prominence compared to other facilities in the perception of a person who has an interest in art. Thus, the components related to art include points of attraction to be perceived and relations formed by the particular type of person in question. Human components including aims and interests also have effects on relationships with place. There are possibilities of restricting or broadening the capacity of place perception through these components. The other factor related to the human component is experience. Çolpan Erkan (1996) states that people perceive the environment more easily when they have a relevant experience that was gained before. Similarly, Özgece, Edgü, and Taluğ (2015) explain that perception is specific for each person due to people's backgrounds consisting of experience and knowledge. Adıgüzel Özbek and Ertürk (2017) note that experience, perception, and movement form the relationship between a body and a place. Moreover, people also have sensory components. The use of senses is essential for people. Aslan, Aslan, and Atik (2015) state that concepts of place differ depending on one's perception with different limitations for natural, artificial, and mixed places. They furthermore argue that limitations may be perceptual, such as limited perceptions of the texture of the ground. People generally use their sense of sight to comprehend the material of a space rather than the sense of touching. Visual perception forms the major part of perception overall (Aslan et al., 2015). Hence, human components influence the perception of a place and, in

turn, the relationship with that place, and they are also affected by means of that relationship.

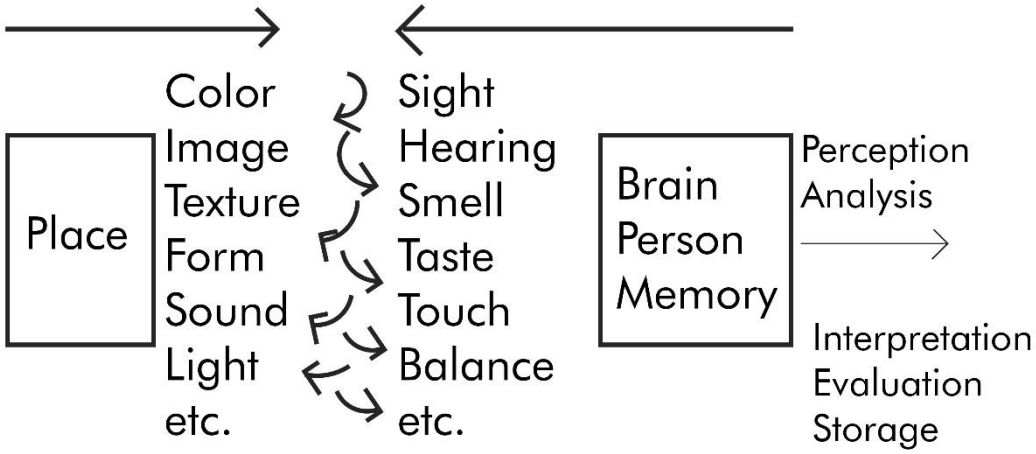


Figure 2.3. The use of senses at a place, adapted from Aslan, Aslan, and Atik (2015).

Spatial stimuli trigger the use of the senses and thus the perception of a place. Aytem (2005) notes that stimuli have different forms of energy through different approaches, such as visual or thermal. In perceiving a place, people get information about that place by means of the use of their senses. Başkaya, Dinç, Aybar, and Karakaşlı (2003) explain that the process of perception includes sensations and the interpretation of sensed information. Thus, cognition has a vital role in perception. In a similar vein, Russell (1980) states that cognition forms perception. Aslan, Aslan, and Atik (2015) argue that people are organisms that perceive, cognize, and behave, and they use their bodies to do these things. Başkaya, Dinç, Aybar, and Karakaşlı (2003) describe the physiological and cognitive processes forming the process of perception. They state that people make interpretations of the outcome of the first processes depending on their backgrounds in the cognitive process and that experiences play important roles in people giving different meanings to their

environments. Hence, human components influence perceptions of place and relationships with place.

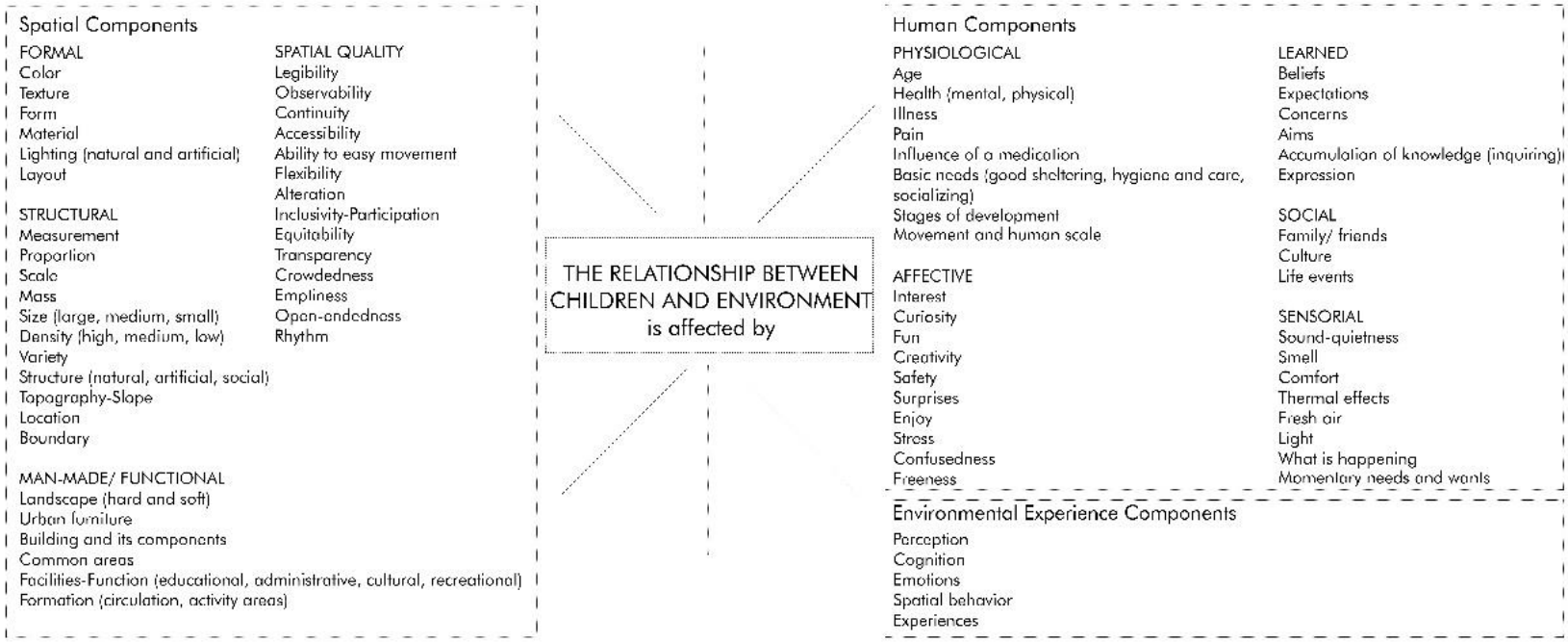


Figure 2.4. Factors of the relationship between children and the environment.

Figure 2.4 provides an extensive list of the components affecting the relationship between children and the environment. The literature review contributed to the finalizing of this list of components. Overall, there are spatial, human, and environmental experience components. Human components include physiological, affective, learned, and social components. Formal, structural, and functional components and components related to spatial qualities can be listed as spatial components. Perceptions, cognitions, emotions, spatial behaviors, and experiences are the environmental experience components. Thus, a place has many characteristics to be perceived and effects to be received. More importance should be given to these factors and opportunities should be provided to impact people's perceptions positively, strengthen their relationships with place, and allow them to receive the positive effects of place in many areas of life, which include learning.

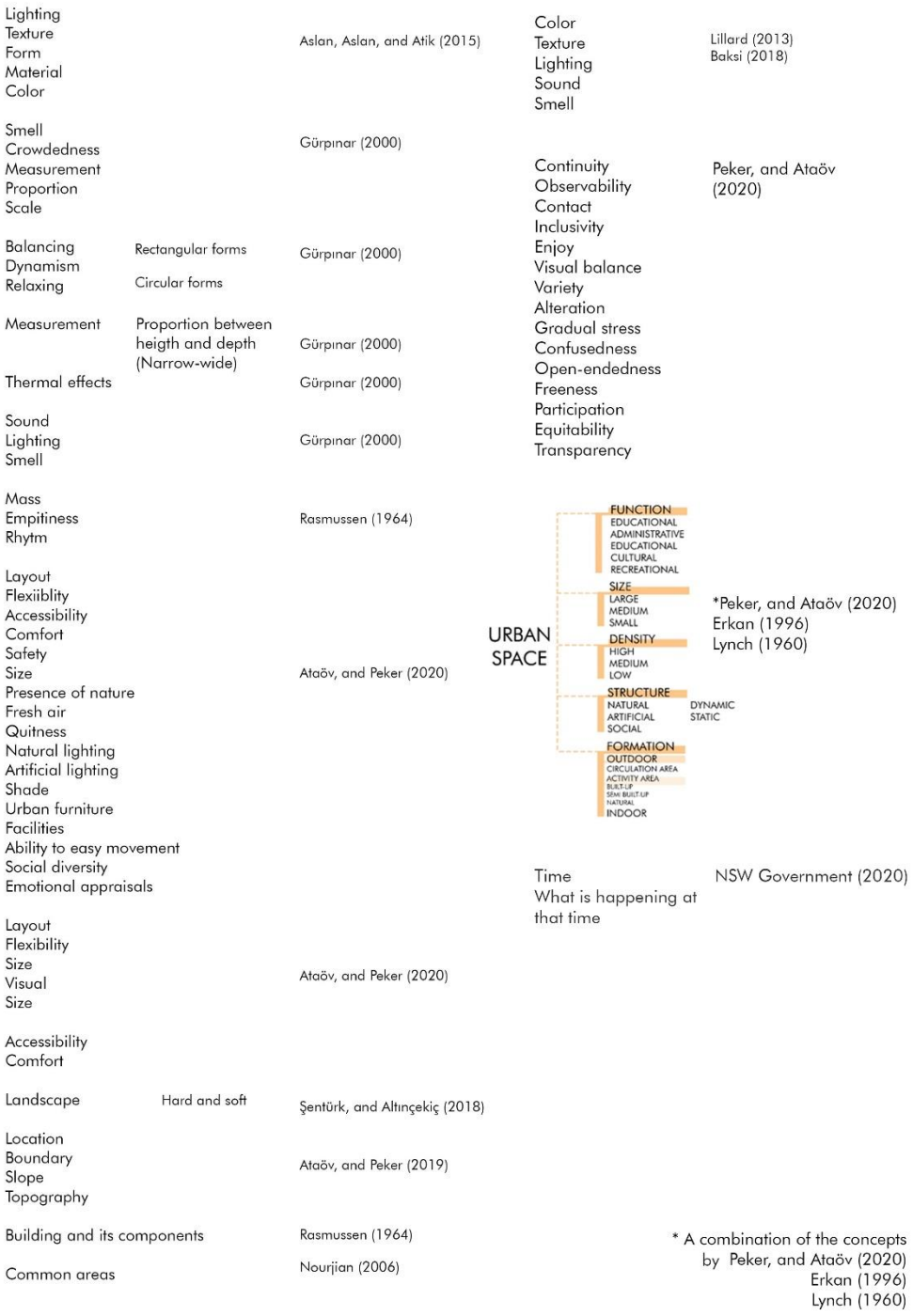


Figure 2.5. Concepts of the relationship between children and the environment from the literature review.

2.1.2.1 How Do Children Perceive a Place?

Köse Doğan and Baksi (2019) state that children's place perceptions develop in accordance with their overall development as children perceive their surrounding environments through constructs of their physical and mental development. For instance, as Kalkanlı (2019) notes, children's place perceptions expand as the children grow, respectively embracing the sequential scales of smaller places, neighborhoods, and larger places. Children experience different developmental stages, and their cognition levels differ at each of those stages accordingly. Kalkanlı (2019) similarly explains that there is diversity among children's attributes, such as their interests or their powers of concentration, and this contributes to further diversity in their levels of interaction with a place in line with their developmental stages. This diversity in interactions brings with it a variety of outcomes from the interactions. Children perceive their environments according to their developmental stages and Kalkanlı (2019) describes how children learn about the concepts of dimensions and perspective as they grow. Therefore, it is important to understand the developmental stages of children in order to evaluate their place perceptions, which are affected by their development.

According to the most common definition, the developmental stages of children consist of the prenatal stage, infancy, early childhood, middle childhood, and adolescence (Kalkanlı, 2019). In seminal work on this topic, Jean Piaget analyzed perceptional and cognitive development based on a division of ages (Baksi, 2018, p. 11). As described by Akarsu (1984), Jean Piaget defined four main developmental stages including the sensorimotor, preoperational, concrete operational, and formal operational stages. The first two stages are based on perceptions and intuitions, while the others are centered on thinking through interactions with situational stimulations. In terms of place perception, Piaget defined topological, projective, and Euclidian space relations as the three main attributes of space (Kalkanlı, 2019, p. 34). Akarsu (1984) argues that topological relations are the basis of the concept of place while the construction of perspective and Euclidian relations have topology as their basis.

Moreover, Canoğlu and Geçimli (2020) describe the role of imaginative relations including signings, nodes, edges, districts, roads, and borders.

	Topological space relations		Projective space relations	Metric space relations	Imaginative space relations
Age range	0-2	2-7	7-10	10+	
Cognitive developmental period	Sensorimotor stage	Pre-operational stage	Concrete operational stage	Formal operational stage	
Parameters of space	Proximity, disconnection, order, enclosure, continuity		Perspective, parallel line	Conservation, block	Definition of sign, node, edge, district, road, and borders
Perception of object	Being isolated from the environment		Perception of the relations with other objects	Defined coordinations of the location of objects, and their relations with others	
Point of view	Ego-centered		No one point of reference	Definition of one point of reference	
Measurement capability	The concept of qualitative space		Emergence of the quantitaive space concept	The concept of quantitative space	
Drawing	The use of straight, and parallel lines		The effort of three dimensional drawing, partial perspective expressions	The relations of size, distance, and realistic, and reference-based perspective	The addition of environmental atributes

Table 2.1. Schema of development and place perception, adapted from Çermikli Buluklu (2015), Kalkanlı, (2019), and Canoğlu and Geçimli (2020).

According to Table 2.1, in topological space relations, as Kalkanlı (2019) explains, children first understand closeness, separation, and order, which are the basis for the concept of space, and the properties of objects are important for these relations. She also notes that the most basic space relationship is proximity. From the aspect of projective space relations, perspectives on and new meanings for objects come into prominence (Akarsu, 1984; Kalkanlı, 2019). Euclidean space relations include the locations of objects and their relations with others within a fixed Cartesian system (Akarsu, 1984, p. 33).

Çermikli Buluklu (2015) states that cognition begins from birth, through interactions with place, and it is a larger process that entails the substeps of processing sensations, generating cognitive schemas, and memorizing. Similarly, Dinç, Aybar, and Karakaşlı (2003) argue that the process of perception includes sensations of objective stimuli as physiological processes and interpretations of cognitive inputs as cognitive processes. Thus, cognition plays an important role in the process of perception. Çermikli Buluklu (2015) notes that people perceive the physical dimension of the environment in accordance with their needs through the use of their senses and by processing the sensations in their minds during cognitive processes. Furthermore, Said (2007) states that visual, audio, and tactile perceptions have influences on the cognitive development of children. As they perceive, they develop themselves. For this reason, it is important to provide spatial characteristics that will be perceived in ways that will have positive effects on children's development. Cognitive functioning is related to the perceptual responses of sight, tactility, hearing, smell, and taste (Said, 2007). As these spatial characteristics affect children by allowing them to develop their perception, they also affect their cognition.

As explained by Köse Doğan and Baksi (2019), children use their sense of sight most often together with tactility to perceive their environments and so components such as color, texture, and lighting are important for their perceptions. Similarly, Başkaya, Dinç, Aybar, and Karakaşlı (2003) note that color and form are important in the physiological process that serves as the first part of the overall process of perception. It is vital to provide appropriate place perceptions for children by means of spatial

characteristics that will stimulate their senses of sight and tactility. Along these lines, Kalkanlı (2019) states that physical movements support children in learning about their environments and gives walking and seeing as examples of such movements. Köse Doğan and Baksi (2019) explain that a place becomes a part of a child's world as it is perceived and experienced. Therefore, it is important to stimulate the senses of children to foster their perceptions of place and support them in receiving the beneficial effects of the place. Within the scope of the relationship between children's cognition and place, Said (2007) argues that children cognize architecture as buildings and outdoor spaces and their relation to naturalness.

Children form relationships with their surrounding environments according to the factors that are relevant to these relationships, just as adults do. People's backgrounds are among the important components affecting perceptions of place, and experience plays an important role in shaping that background. Başkaya, Dinç, Aybar, and Karakaşlı (2003) describe experience as a factor that gives meaning to the environment. With their diverse backgrounds in the fields of art and culture, children interact with museum settings in their own unique ways and the contributions of these settings to their understandings of art and culture vary accordingly. For instance, a person who is deeply interested in art is more open to receiving the effects of places devoted to art. As explained by Merleau-Ponty (1948), objects have impacts on people's emotions. CerModern is one of the most important cultural centers of Ankara and so it is not surprising that the building itself carries meanings pertaining to art for the people of Ankara. In an interview conducted with a child before beginning the case study presented in this thesis, the child stated that the place makes her happy as she likes art and enjoys participating in the activities of CerModern. Thus, the place arouses positive feelings in this child, and its administrative and spatial opportunities centered on art strengthen her connection with the place. Although there are unique differences in different children's relationships with the environment, there are also common features of children's place perceptions. For example, sculptures, trees, and pools in squares are attractive objects for children (Ataöv & Peker, 2020, p. 25). These attractive objects change

their place perceptions and places that feature these objects are prioritized in children's perception processes.

More so than older individuals, children are characterized by components such as curiosity and the desire to have fun, which affect their place perceptions and the relations that they subsequently form with the place. Köse Doğan and Baksi (2019) note that there are differences in the place perceptions of children and adults based on their physical and mental activities. In other words, children's place perceptions are different from the place perceptions of adults. As Kalkanlı (2019) explains, the effects of children's experiences, which are nascent compared to those of adults, impact their place perceptions in a unique way, the perceptual sense of children being more spatially based. Said (2007) argues that architecture education centered on young children mostly focuses on the perceptions of adults and there may be incompatibility in terms of the functioning of children. Thus, there is a need to consider the components affecting their perceptions and cognitions while designing places for children. Similarly, there is an overwhelming consideration of the interests of adults in place design in developing countries (Kalkanlı, 2019). Thus, as Said (2007) states, there must be consideration of the cognitive functioning of children in efforts to design appropriate spaces for them, as well as their physical and social functioning. This thesis focuses on children's perceptions of the spatial characteristics of a place, and so it gives importance to the cognitive functioning of children, which is related to their perceptual responses to place, and its components, as Said (2007) advocates.

2.2 Interactions Between Places and Children According to Spatial Characteristics

People perceive in order to form relationships with a place. The relationships between people and place are influenced by many factors arising from the characteristics of both the people and the environment. There are interactions between these components in the relationships between people and places as people

react to the visual components of a place. These reactions are evaluative responses that include emotions and behaviors (Ataöv, 1998). For instance, people have positive feelings towards beautiful places, and that makes people want to spend more time in such places. In cities, it is important to provide places that have components that will affect people in positive ways. From the perspective of the field of planning, there is a need to recognize that specific environmental attributes have specific effects on people, and so environmental aesthetics is an important area in the field of planning (Ataöv, 1998). The following subsections respectively elaborate on responses to environmental variables, the spatial characteristics of a place and their effects on children, and the relationships between urban spaces and children.

2.2.1 Effects of Spatial Characteristics

Children engage in interactions with the environment from the time of their birth, and the effects of the environment at an early age are combined with perception and the adoption of that environment at later ages (Baksi, 2018, p. 36). Environmental factors are important for children's development in addition to hereditary qualities; thus, places in which children enjoy interactions are important for their development (Baksi, 2018, p. 36). Lillard (2013) similarly argues that children need to be free and participate in interactions with the environment for the development of their personalities. In order to design places where children will find opportunities to develop themselves, their needs and their motivations or triggers should be identified (Ataöv & Peker, 2020, p. 35). Children must participate in interactions with the environment in order to develop themselves, in contrast to adults, who are more experienced (Lillard, 2013, p. 77).

Children should have strong relationship with places to receive the effects of those places. Children's strong relations with a place depend on that place's positive effects on the children's personal characteristics, such as their needs and triggers. For instance, curiosity is an important trigger among children and explorable environments trigger children's curiosity (Ataöv & Peker, 2020, p. 28). Thus, it is

important to direct children's attention to such places and allow them to form relationships with places through exploration. If their needs and triggers are supported in a given environment, they can respond to the environment in a way that will allow them to establish a relationship with it (Ataöv & Peker, 2020, p. 38). In this way, they have opportunities to receive the positive effects of that place on their development.

According to Maria Montessori, children need settings with specific conditions in order to develop themselves (Lillard, 2013, p. 52). In the design of places that will have effects on children, their needs, triggers, and other human components must be considered together with the effects of the environment. These are the inputs of the relationship, while the learning outcomes of the children are the outputs. Thus, environmental responses comprise the effects derived from the children's perceptions. They will support children's development if the effects are positive. While the environmental responses form children's perceptions through spatial characteristics, the responses of the children to the environment include their own spatial behaviors. The environment has components, or spatial information, to be perceived by children. Çolpan Erkan (1996) explains that perception is related to the obtainment and evaluation of information while spatial behaviors are actions and reactions in light of that information. It is also probable that spatial behaviors will affect spatial modifications. For example, land art allows children to become involved with nature through the modifications they make using natural materials. In this sense, an environment where land art occurs offers opportunities for children to perceive natural materials and make place-based changes using their senses. This example of land art highlights how the environment can give responses to children through its own spatial characteristics, which children perceive through their senses, and the children later give their own responses to that environment by means of spatial behaviors aimed at designing and organizing the environment. Çolpan Erkan (1996) explains that behaviors are aimed at meeting needs. Therefore, children search for the "answers" of a place in order to fulfill their needs by using that place and its opportunities. Children aim to satisfy their curiosity and their desires of

inquiring and exploring within such an environment. There are a variety of possible examples of the corresponding responses between children and places. Playgrounds are attractive places for children, for example. They provide opportunities for children to fulfill their curiosity, satisfy their desires to inquire and explore, and improve their physical and social skills and then test those skills. This shows that there are effects on children's development at the end of processes that involve corresponding responses.

Furthermore, Ataöv and Peker (2020) state that children need opportunities related to comfort, trust, joy, curiosity, creativity, and self-expression in a given place. The promotion of those goals is as important as the support of the children's development. For instance, Değirmenci, Bulut, and Kuzey (2020) explain that safe places have effects on children's curiosity and exploration. Children develop their skills by means of their perceptions and spatial behaviors in such places. Thus, it is important to consider children's needs. Moreover, there should also be consideration of how to provide opportunities to promote children's feelings of trust, comfort, curiosity, creativity, and self-expression.

Children choose the environments that they enjoy and they want to be in places where there are opportunities for their amusement (Ataöv & Peker, 2020, p. 36). Play is an important tool for attracting children's attention, providing both fun and self-improvement, and building a social environment for children. It is also another tool that allows them to interact with the place. They need safe, comfortable, enjoyable, and unobstructed places where they can play (Ataöv & Peker, 2020, p. 30).

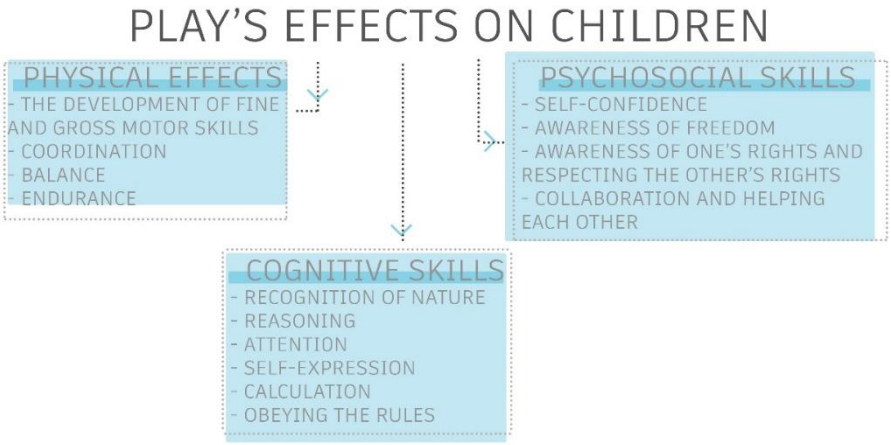


Figure 2.6. Effects of play on children, adapted from Şen and Öksüz (2016).

Figure 2.6 indicates the effects of play on children's development from physical, psychological, and cognitive perspectives. Accordingly, contributions are made by places that offer opportunities for satisfying their desires for fun and support their development in various areas through play. To ensure social change, it is essential to supply such places that children enjoy, where they will be happy to spend time and where they will gain contributions to their creativity (Ataöv & Peker, 2020, p. 36).

Another example of satisfying children's desire to have fun is that of open spaces. Accessible green spaces engage children's attention by allowing them to play (Ataöv & Peker, 2020, p. 58). Curiosity is another trigger for children, and Zeyrek Çepehan and Güller (2020) explain that their curiosity to discover and learn leads children to be dynamic users of places. Moreover, curiosity is one of the components of learning (Nourjian, 2006, p. 11). Environments can be included among the surprises that can attract children's attention, and they encourage children to explore. As explained by Ataöv and Peker (2020), children live within a society and develop their identities accordingly. In cities, urban open spaces are the most appropriate places for children to develop their identities (Ataöv & Peker, 2020, p. 18). Thus, designs of urban open spaces should have perspectives shaped by considerations of children's needs and triggers, and they should contribute to their development from many different angles.

Özgece, Edgü, and Taluğ (2015) state that outdoor environments support the development of independence and autonomy in children, which encourages children to spend more time in such places. Similarly, Ataöv and Peker (2020) describe the opportunities offered by urban open spaces for children's development in terms of learning. Thus, these places have great potential to make contributions to the development and learning of children. On the other hand, as Ataöv (2005) notes, indoor environments may lead children to play games based on adventure. In other words, there are potential opportunities for promoting children's development in both indoor and outdoor settings. Researchers may propose the design of the components of children's environments to include open or closed and low or high places that are related to each other and form larger entities that will allow for different activities (Ataöv, 2005).

The flexibility of an environment is also important for children. There are opportunities for exploration that will engage children's attention in flexible environments. They also have chances to change the environment's attributes by utilizing the physical characteristics of the environment and their own mental processes. For instance, the floor can be used as a "canvas" where children can paint in ways of their own choosing. In other words, tables, among the physical components of an environment, are not the only surfaces that children can use for artistic activities. Architectural components of larger scales can also provide space for these activities.

Figure 2.7. Drawings by children on the pavement.

Figure 2.7 shows how the ground may function as a place for painting or drawing. Such opportunities trigger children's curiosity and their desire for fun and inquiry. There are opportunities to develop their insights and knowledge of art through the use of colors within the settings of such places. Thus, these places have important roles in children's learning processes. They perceive a place and its attributes by means of their senses, and later, they become a part of place-based mental and physical processes. Similarly, Hein (1991) states that children should participate in hands-on activities through physical and mental processes from the perspective of constructive learning.

It is essential to provide social environments for children due to the fact that they are social entities just as adults are. Corresponding responses accordingly occur between children and other people, just as they do between children and place. Lillard (2013) states that, according to Maria Montessori, the enhancement of children's creativity requires choosing relations, solutions, and ideas and sharing them among individuals in a free environment (pp. 86-87). Therefore, it should be kept in mind that children need social relations within places in addition to personal relations with place, and the spatial factors of the relationships between them and relationships with the place are highly influential.

Accessibility is an important factor to allow all people to benefit from the opportunities of a place. Places should be appropriate for the comfortable movement of children. They need accessible places that offer opportunities to experience new things, expand the limits of their imagination, and freely improve their skills (Zeyrek Çepehan & Güller, 2020). Furthermore, children need environments that will make them feel free and allow them to interact with others for the sake of their personal development (Polk Lillard, 2013, p. 67). Kalkanlı (2019) explains that scale, security, action, and social opportunities all have effects on children's perceptions and usage of a place. Polk Lillard (2013) states that it is important to provide opportunities to test whether children's skills have improved, and children may receive opportunities to test their creativity skills with the help of activities in the types of settings described here. Testing the improvement of skills is an important component of children's natural environments (Lillard, 2013, p. 31). Hence, it is important to provide environments that children can easily access and that will meet their needs and satisfy their desires. These environments should offer children opportunities to think, use their senses effectively, and express themselves freely. In turn, this will lead them to spend more time in these places and build strong relationships with them. They will have chances to test themselves and to benefit from these places as the places make contributions to their development.

Lillard (2013) also mentions the impacts of the color of walls, the sounds of an environment, and the presence of activities for children on their development. In other words, environmental stimulation is significant for the development of children (Lillard, 2013, p. 53). Similarly, Said (2007) notes the effects of visual, audio, and tactile perceptions on the cognitive development of the children, with the stimulation of these senses through spatial characteristics being important to support their development. The fulfillment of children's needs and support of their interests will make their perception of a place easier. This prepares them for interacting with the place and subsequently receiving the contributions of the place. In addition to fulfilling their needs and supporting their interests, spatial characteristics also make it possible for children to have strong relationships with the environment. That is

why the components of a place should be considered together with the components of the children.

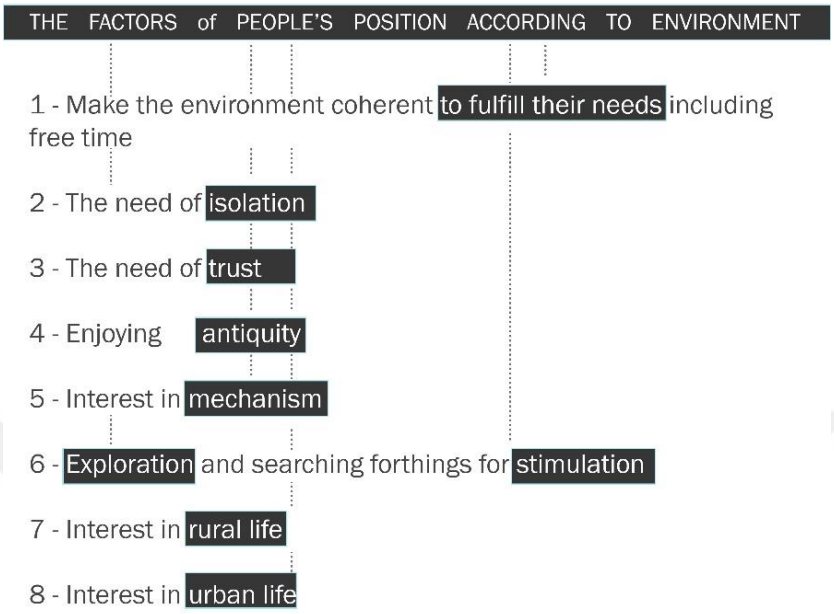


Figure 2.8. Factors of children's positions according to the environment, adapted from Bilgin (1984).

As shown in Figure 2.8, there are eight factors of people's positions according to the environment. These have importance for children, as well. These factors presented by Bilgin (1984) were originally defined by George E. McKechnie, and Jean Morval gave special attention to them while conducting a study with children. The consequences from that previous research are provided in Figure 2.8.

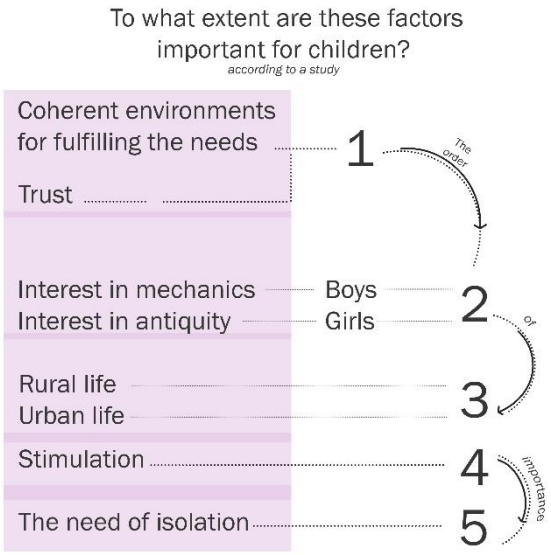


Figure 2.9. Order of importance of environmental factors for children, adapted from Bilgin (1984).

Figure 2.9 presents the order of importance of the factors mentioned above according to the findings reported by Jean Morval (Bilgin, 1984). As can be seen here, eliminating the needs in a given environment and ensuring trust in the environment are prominent for children. There are differences in interests depending on the user's characteristics, such as age or gender. According to Morval (Bilgin, 1984), boys were more interested in mechanics while girls were more interested in antiquity. Rural and urban life attracted less attention than the previous points. The need for isolation was the least important factor of the environment for children. These differences make it possible for children to form diverse relations with the place and, in turn, receive various effects and contributions from the place.

Ataöv and Peker (2020) state that children respond to a place if there is fulfillment of their needs and interests. Children make these responses through spatial behaviors and modifications. This makes places become more vital; in fact, it is a need to be fulfilled by people due to the corresponding relationships arising between people and places (Adıgüzel Özbek & Ertürk, 2017). Children will receive positive effects

arising from their relationships with places if the design is appropriate for children, considering their human components such as physiological components, which include basic needs, and affective components, which include curiosity. Thus, places exert effects and accordingly make contributions to children in various ways.

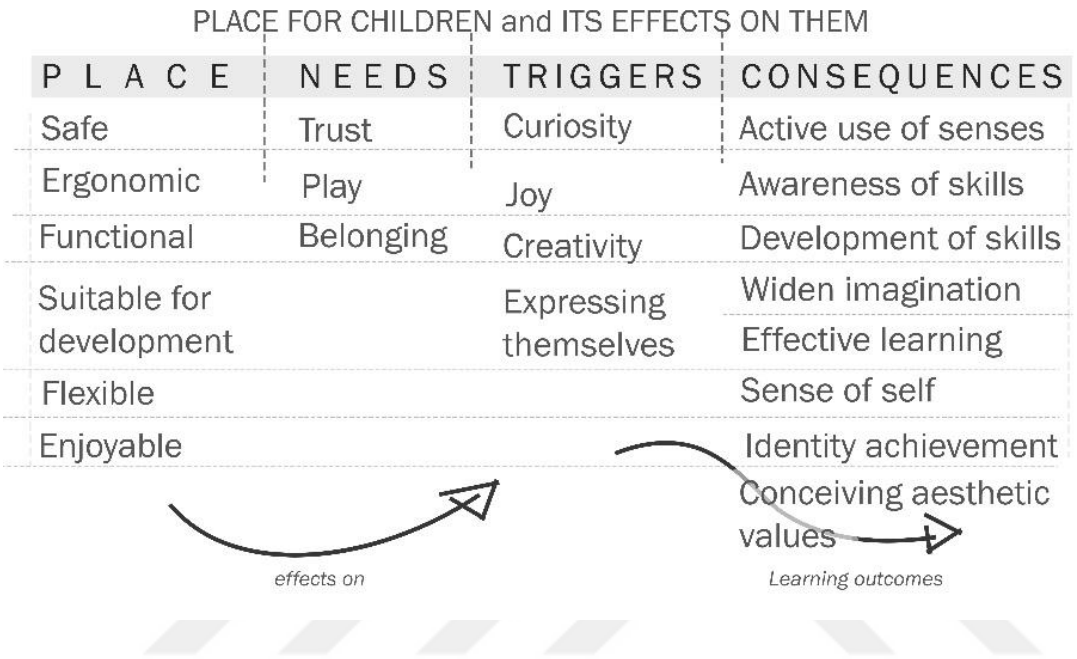


Figure 2.10. Effects of places designed for children based on data obtained in the course of the literature review.

Figure 2.10 lists the features of a place, its effects on children, and the subsequent contributions of a place that is designed for children. This kind of place positively impacts the children's needs and triggers in terms of fulfillment. This results in children's effective use of their senses, awareness of their skills, and self-development. They also broaden their horizons as they learn and experience. Hence, there are many learning outcomes for children at a given place. These can also be understood as the contributions of a place that properly fulfills their needs and meets their interests. Such a place contributes to their development in various ways. Sheikh Asadi and Hojat (2020) state that understanding the needs, interests, and preferences of children allows for more meaningful learning environments for them.

Ataöv and Peker (2020) defend that children's effective learning depends on creativity which play is an important tool. So, they need to be free while testing their creativity. As Ataöv and Peker state, it is vital to provide changeable environments that trigger children's senses. These environments lead children to use their senses actively, expand the horizons of their imagination, develop their skills based on creativity, and learn effectively. Similarly, Johnson (2000) describes the associations among social, emotional, cognitive, and physical development and learning.

Ataöv and Peker (2020, p. 35) argue that there should be consideration of the needs and sensory triggers of children in efforts to design places that offer opportunities for their development. Children can reach important learning outcomes through the environment's effects on them, resulting from strong relationships arising between them and the environment that will provide opportunities for them to fulfill their needs, satisfy their interests, and support their perceptions, spatial behaviors, and modifications. Thus, importance must be given to the needs and triggers of children together with other human components, spatial opportunities for sensory and environmental stimulation, and other components that will provide a suitable design approach to urban spaces to make contributions to children's development and help them achieve their learning outcomes. These learning outcomes include the efficient use of senses and awareness; the development of skills, insight, and knowledge; and the expansion of the imagination, sense of self, identity, and comprehension of aesthetic values (Baksi, 2018; Ataöv & Peker, 2020).

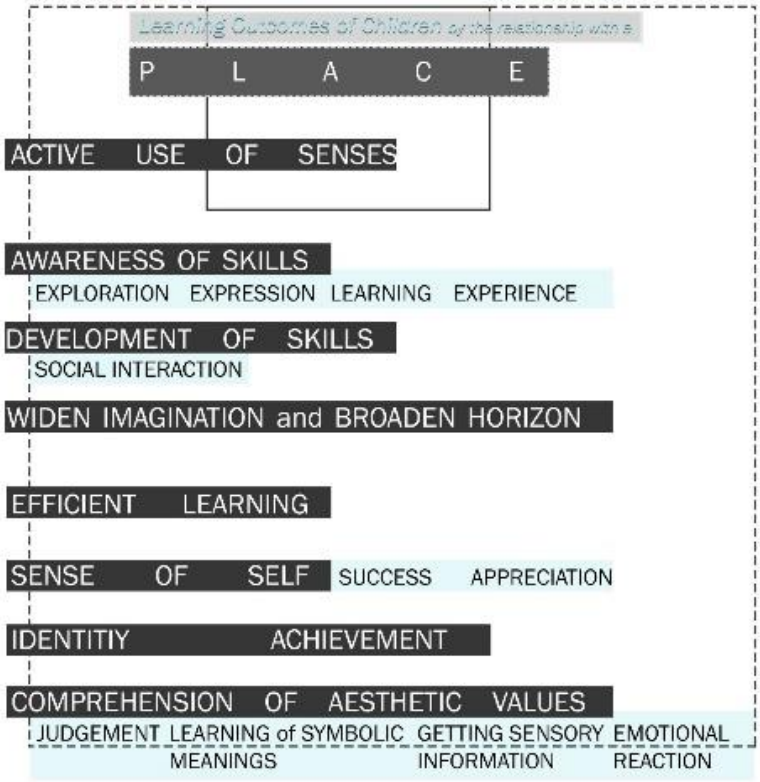


Figure 2.11. Children's learning outcomes via relationships with a place, adapted from Ataöv and Peker (2020) and Baksi (2018).

Figure 2.11 presents the detailed learning outcomes that can be gained in a given place via a relationship with that place. Değirmenci, Bulut, and Kuzey (2020) argue that recognition and comprehension of a place allow children to benefit from the environment. Thus, the effect of spatial characteristics on place perception are considerable. In a similar vein, Köse Doğan and Baksi (2019) state that the physical parameters affecting place perception have impacts on physical and mental development, highlighting the importance of the proper use of stimulation.

Figure 2.12. Children playing at AN Kindergarten/HIBINOSEKKEI + Youji no Shiro (Studio Bauhaus, n.d.). Retrieved from: https://www.archdaily.com/781271/an-kindergarten-hibinosekkei-plus-youji-no-shiro

Figure 2.12 offers an example of a place enhancing children's development through its spatial characteristics. Köse Doğan and Baksi (2019) state that cottages and play areas trigger investigation and enjoyment among children. Furthermore, Baksi (2018) states that the emergence of emotions has an impact on development. Thus, spatial characteristics play important roles in affecting children's emotions and, in turn, their development. Ataöv (2005) notes that children's preferences for particular places shape their emotional reactions to those places, and the differentiation of places, including the texture of the ground, use, and natural components, impacts these preferences. In addition, Jack (2008) emphasizes that children have feelings about places from young ages. Therefore, the emergence of emotions and feelings is one of the outcomes resulting from the effects of the spatial characteristics of a place.

2.2.2 Responses to Spatial Characteristics

Ataöv (1998) states that environmental aesthetics are related to the reactions of people to the visual quality of the environment, and there are four general categories

of this field, which are perceptual and cognitive processes, emotional and affective appraisals, relational aspects, and interactive research. This study focuses on the effects of spatial characteristics on learning. It is therefore important to understand the relationships between these characteristics and people based on the first three categories listed here.

Perception is necessary for forming relations with a place and, in turn, giving responses to the place. Ataöv (1998) explains that studies addressing this first category of environmental aesthetics emphasize the acquisition, organization, and memory of environmental attributes while the second focuses on emotions and affects. Thus, the process of giving responses to the environment starts with perception and cognition, and then continues with the acquisition of information related to the environment, the organization of this information, memory processes, and showing emotions and affects in response to the information. The third category considers the relationship between the first and second categories. It includes both objective and subjective models. While people take information related to the attributes of the environment without individual evaluation in objective models, people give meanings to the perceived attributes in subjective models.

Perceived spatial characteristics are important for responses to the environment. There are spatial characteristics changing the perception of a place. Aslan, Aslan, and Atik (2015) explain that there are dimensional, thermal, acoustic, and visual perceptions of a place. They state that visual perception consists of mostly visual attributes of lighting, texture, form, material, and color. Moreover, Gürpınar (2000) mentions crowdedness, smells, measurements, proportions, and scales.

Blue	According to Göler (2009), i helps to think, make decisions, and be creative.
Green	It gives relaxation, serenity, and happiness.
Orange	According to Aydıntan (2001), it has maximum temperature, and lighting power of sun.
Purple	It is the color of mystery.
White	It is the color of purity, abstractness, and intelligence.
Yellow	It gives cheer, and vitality.
Red	It is the color of self-confidence, energy, passion, and power.

Figure 2.13. Color's effects on people, adapted from Aslan, Aslan, and Atik (2015).

Color has effects on emotions. Gürpınar (2000) states that the use of color impacts the variety of forms and the temperature of a place. As an example, he explains how the use of appropriate colors can complete the entirety of a place and make people feel happy. Similarly to colors, textures also influence people's feelings, the temperature, and the perceived dimensions of the place, and, according to Gürpınar (2000), form is the main component of place and affects the confidence, the entirety, and the whole effect of a place. He also notes the effects of balancing and dynamism through rectangular forms, and the relaxing effects of circular forms. Thus, forms have effects on feelings similarly to colors and textures. Başkaya, Dinç, Aybar, and Karakaşlı (2003) argue that color and form are the factors that make contributions to physiological processes, which are among the subprocesses of perception. Another factor affecting feelings is the factor of measurements. Gürpınar (2000) gives examples of how narrow spaces generate aggressive feelings and high ceilings arouse divine feelings. He explains that the use of appropriate measurements will make people feel comfortable while, in terms of the proportions between the height and depth of structures, there are effects on people's perceptions of the place, and feelings such as being lost or oppressed may arise. There are also thermal effects of place on people's behaviors. As an example, Gürpınar (2000) explains that people may prefer to spend more time in places with cool air during the summer. Sound is

another factor of place perception that contributes to the perceived identity of a place and its activities. For instance, the sound of a concert at a particular place provides hints about methods and distances. Moreover, sound has effects on feelings in relation to the components of a place, as larger and smaller places experience the durations of reverberations differently. Lighting is another important spatial characteristic affecting perception and it is critical for perceiving the components of a place such as color, texture, and form. It provides the visibility of a place. Gürpınar (2000) furthermore states that lighting should have suitable directions, should not be overly vibrant, and should make shadows. The lighting of the sun is the most appropriate lighting to satisfy these criteria. Smell is another component that contributes to the identity of a place and affects the activities within it, and Gürpınar (2000) gives the spicy smell of İstanbul's Spice Bazaar as an example. He states that there are also effects on feelings in terms of the crowdedness of that place. In addition, Rasmussen (1959) mentions mass, emptiness, and rhythm. In terms of mass, emptiness, and contrasts emerging from them, he describes dramatic effects, the variety within an order, and repetitions within the scope of rhythm.

Moreover, Peker and Ataöv (2019) list layout, flexibility, accessibility, comfort, safety, size, presence of nature, fresh air, quietness, natural and artificial lighting, shade, urban furniture, facilities, ability to move easily, social diversity, and emotional appraisals as design attributes. These are significant spatial characteristics influencing people, their relationships with places, and their responses to places. For instance, according to Peker and Ataöv, grassy areas are evaluated as comfortable spaces for resting. They add that there are contributions of natural settings to learning. In a similar vein, Said (2007) argues that nature supports development.

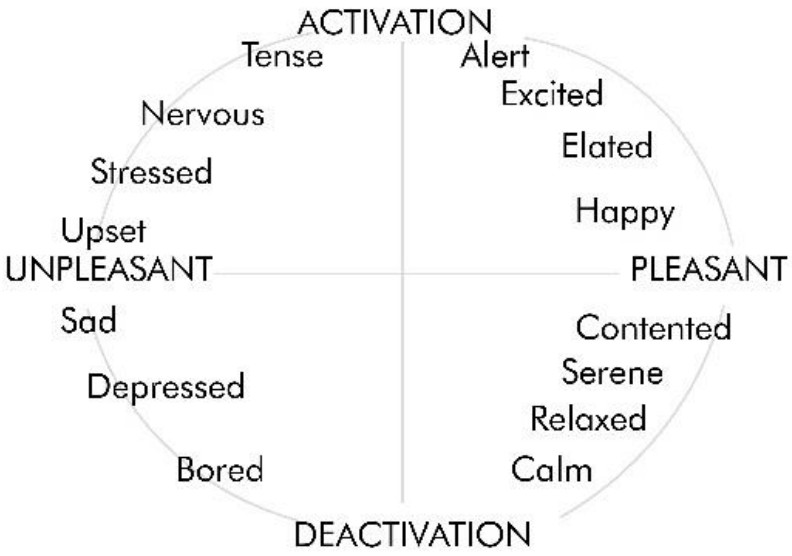


Figure 2.14. Circumplex model of affect, adapted from Russell and Bradley (2005).

In addition, Baksi (2018) describes the emergence of different emotions through a place depending on stimulation. She states that the satisfaction of the users of a place depends on the proper use of factors related to the spatial qualities of design such as color, texture, and lighting and social factors such as age and gender. According to the circumplex model of affect, a linear combination of two dimensions forms each emotion (Posner, Russell, & Peterson, 2005).

Thus, spatial characteristics affect people's place perceptions, emotions, feelings, and behaviors. Rasmussen (1959) states that architecture is made for people's living, not for merely looking at it. Said (2007) explains that space provides stimulation of the senses of children through sensory and motor activities. Thus, it is important to understand the perception process, perceived attributes of a place, the responses to them, and their effects on people's attributes such as needs and triggers.

2.3 Children's Relations with Urban Space

This section first discusses the concept of place within the specific context of urban places and then addresses children's relations with urban places. The reason for emphasizing urban places is that the study site for this thesis is a museum and museums are important urban cultural places. This thesis accordingly addresses the problems arising from weak relationships between children and urban spaces (Ataöv & Haider, 2006, p. 128).

There are many diverse urban spaces in cities varying according to features such as function, size, and density. Urban space consists of natural and artificial structures and functions, and built-up and open spaces (Çolpan Erkan, 1996, p. 33).

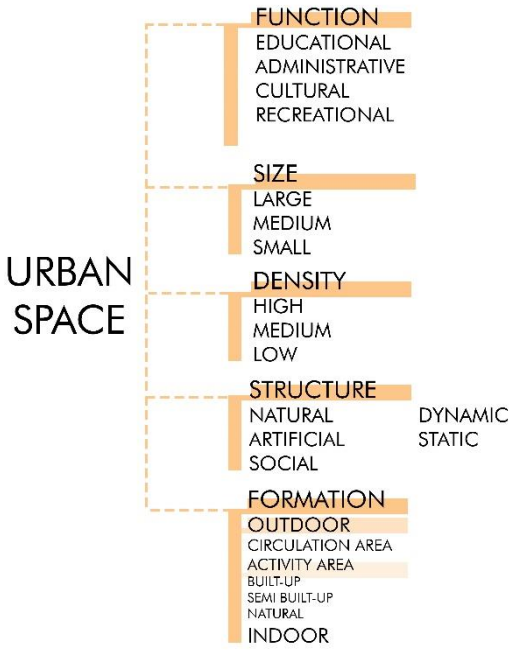


Figure 2.15. Urban space and its features, adapted from Çolpan Erkan (1996), Lynch (1960), and Ataöv and Peker (2020).

Figure 2.15 lists the features of urban space. Çolpan Erkan (1996) suggests that urban space has six dimensions, which are length, width, and height as physical attributes of the space and time, function, and history as the others. The function of a place is

a provision of activities at that place. This functionality leads people to socialize and develop their sight and knowledge by means of the function of the place. For instance, squares in cities host different activities such as festivals, concerts, and open-air markets. These urban spaces provide various opportunities for people to socialize and engage in different activities. In addition, there is a diversity of size and density among urban spaces. Streets, for example, are urban spaces and their density differs according to the density of the functions along the street. This density depends on people's use of the function. Other examples related to the size of urban spaces are city parks. Neighborhood parks are small in comparison to urban parks.

Urban spaces have structures that are dynamic, static, natural, artificial, and social. Lynch (1960, p. 2) states that dynamic urban elements and activities are as important as the static ones. Dynamic urban elements, which include people and the activities in which people are engaged, are of considerable importance in making urban places vital. As Adıgüzel Özbek and Ertürk (2017) explain, there is integration between a place and people, and this leads them to generate each other. Therefore, the people and the activities are social and dynamic structures of urban spaces, and they increase the mobility of urban spaces.

Çolpan Erkan (1996) divides the formation of an urban space into the two realms of indoor and outdoor areas. Ataöv and Peker (2020) defend that open spaces are significant for the fulfillment of the needs of children such as squares, school gardens, and playgrounds. There are more opportunities for these spaces to form relations with children and make contributions to their development. That is why museums' outdoor settings are as significant as their indoor settings in evaluations of their contributions to children's learning of art within the scope of the present study. It is important to provide open public spaces that mostly consist of green areas and provide opportunities for various activities for children. The spatial factors of these spaces, which include both activity and circulation areas, have impacts on the relationships between children and the place itself together with other factors. Hence, there should be consideration of these places' spatial factors in order to fulfill

children's needs, positively affect their affective and learned characteristics, and support their development by making contributions to their skills.

There are three main activity areas, which are built-up, semi-built-up, and natural areas (Ataöv & Peker, 2020, p. 24). Thus, activities taking place in urban open spaces have locations that surround closed spaces or are full of natural elements. The spatial factors of these areas are different from each other.

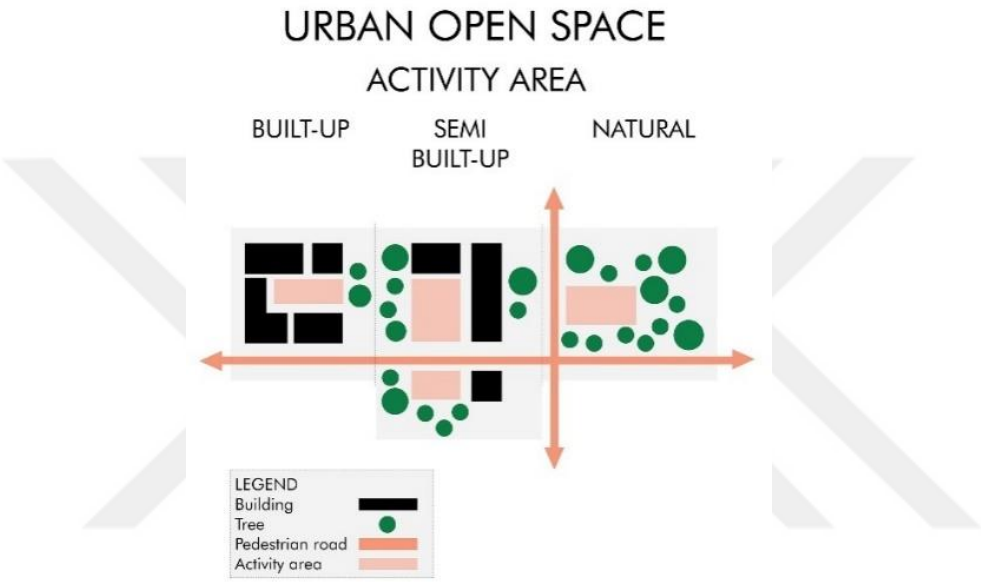


Figure 2.16. Built-up, semi-built up, and natural urban open spaces.

Figure 2.16 shows built-up, semi-built-up, and natural activity areas and urban open spaces. If an activity area is surrounded and defined mostly by buildings, it is a built-up activity area. It may also be a semi-built-up space if there is only one building. Pedestrian roads and natural materials like trees define activity areas as open elements in comparison to buildings as closed elements.

The variety among open spaces results in different opportunities and contributions to children's perceptions, relations, and corresponding responses to a place and then, in turn, to their development. Land art is an example of an activity intended for free expression and creative acts through natural materials in open spaces. Thus, the location for land art is an activity area and a natural urban open space. Ataöv and

Peker (2020) state that children's free expression of themselves and their creativity are the main triggers. It is highly probable that urban open places with opportunities via activities such as land art will support children's learning of art by supporting their affective components, which include expression.

Figure 2.17. Land art by children (Anonymous, n.d.). Retrieved from: https://www.landartforkids.com/how-to-make-land-art.html

Figure 2.17 illustrates how land art provides the potential for children's development of their knowledge of art and culture by means of its spatial components.

Figure 2.18. Children playing on a playground.

Figure 2.18 illustrates children playing on the playground in the children's garden of a school. Ataöv and Peker (2020) specify that school gardens and playgrounds are activity areas. Thus, this is an instance of an activity area and a semi-built-up urban open space. Specifically, it is a semi-built-up open space because of the playground's surroundings, which consist of trees, a sidewalk, a circulation area, and the building of the nursery of the school. They emphasize that play taking place in open public spaces makes important contributions to children's development. Children have the opportunity to improve their physical and mental skills through such an urban open space and its structures. The playground and the place itself are the artificial and natural structures while the children constitute the social structures.

Accordingly, these are places satisfying their desires to have fun, make inquiries, and explore. This allows the children to form relationships with the place and, in turn, receive the positive effects and contributions that result from those relationships.

Figure 2.19. Painted walls of the children's garden at a school.

Figure 2.19 portrays the painted walls of a children's garden, which were used as a canvas. This is a significant example of how an outdoor setting's components may offer opportunities for use as tools for people's artistic expressions. Accordingly, it can be deduced that there is a possibility of flexibility with the components of such

an outdoor setting, and the flexibility of the walls shown in Figure 2.19 in terms of their re-paintability has effects on the children's free self-expression.

Figure 2.20. School building and children's garden of Hamdullah Suphi Primary School.

In Figure 2.20, the school and children's garden of Hamdullah Suphi Primary School can be seen. As explained by Ataöv and Peker (2020), school gardens and children's garden are activity areas and semi-built-up urban open space. Thus, Figure 2.20 offers an example of places that are activity areas and semi-built-up urban open spaces. Moreover, these photographs show that a variety of activities take place in the school's garden. The photograph at the upper left of Figure 2.20 was taken on April 23, celebrated in Türkiye as the public holiday known as National Sovereignty and Children's Day. Thus, there were some preparations at the school to celebrate this special day. Turkish flags and posters of Atatürk were hung on the front of the school building and a ceremony was prepared. Furthermore, this is an example of the effects of spatial behaviors on spatial modifications. People take part in activities to celebrate events. Moreover, the suitability of the school garden for celebrating special days gives rise to people performing spatial modifications there. Spatial behaviors and modifications are accordingly responses to the place.

Figure 2.21. A playground located in an open space of a shopping mall.

Figure 2.21, on the other hand, shows a playground in an open space of a shopping mall. This is an example of an activity area and semi-built-up urban open space. There is a pedestrian road providing a connection to facilities such as a playground and a sitting area.

Circulation areas can also be used as activity areas under some conditions. For instance, during the "Başkent Kültür Yolu" festival in Ankara, there were events held in different parts of the city. Hamamönü was one of the neighborhoods hosting cultural events. Figure 2.21 illustrates how both circulation and activity areas have the potential to be places for different activities.

Figure 2.22. Concert area in Hamamönü during a cultural festival of the city.

School gardens, cafeterias, and circulation areas are learning environments that are as significant as classrooms (Şensoy & Midilli Sarı, 2019, p. 443). As Ataöv and Peker (2020) state, urban open spaces offer many opportunities for children's development by acting as the main informal learning environments of children rather than neighborhoods or classrooms. Corridors and cafeterias are located indoors while school gardens and children's gardens are located outside of their schools. These are places where many social interactions occur between children at school. Therefore, children have opportunities to develop themselves in different ways by forming relationships with indoor and outdoor places. Importance should be given to indoor settings as well as outdoor settings in terms of understanding their contributions to children's development.

According to Çolpan Erkan (1996): "Indoor is a place providing mostly privateness, and educational, cultural, working, and sheltering functions" (p. 40). Another example for evaluating circulation areas or squares as activity places is the shopping mall. Shopping malls offer specific activities for children on special days.

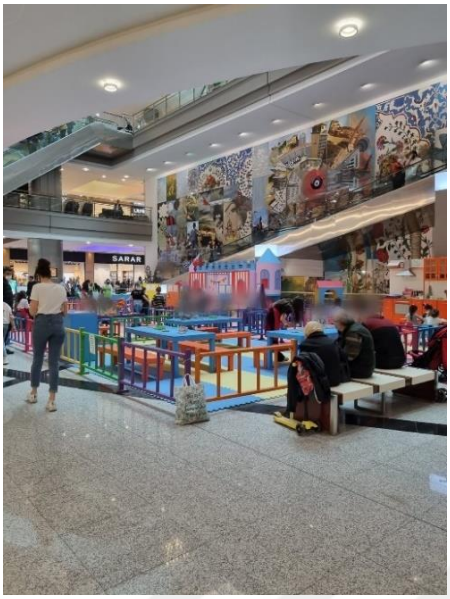


Figure 2.23. Indoor setting of a shopping mall.

Figure 2.23 presents an indoor setting that hosts an activity area for children.

Çolpan Erkan (1996) further states that outdoor areas support indoor areas' livability with appropriate light and weather conditions in open and semi-open areas. Thus, there is a relationship between indoor and outdoor space. Gür (2017) explains that the production of a house takes place from its indoor to outdoor areas. There should be strong spatial connections between indoor and outdoor so as to strengthen the overall relationship between them because of the fact that these connections provide permeability and the continuity of elements such as line of vision, air circulation, and the flow of people. These connections also have relations with the perceptions of people due to the effects of spatial factors on perception. A person perceives an object indoors and an object outdoors at the same time by means of the openness of the built-up place. For instance, Frank Lloyd Wright gave importance to the use of natural elements, which are important for urban open spaces, in his architectural style called "Prairie." The integration between a building and the outside of it is taken into account in this style (Ehinger, 2019). In a similar vein, the shift from outdoor to indoor space can be provided by using large windows to make it "softer" (Ehinger,

2019). Thus, the connection between indoor and outdoor areas as a spatial factor is important for perception and, in turn, for the relationships between people and places. This has impacts on the contributions of a place for people as well as other factors of perception.

Figure 2.24. Large windows of the building of Museum Voorlinden (Anonymous, n.d.). Retrieved from: https://www.chaptertravel.com/museum-voorlinden-day-trip-in-the-netherlands/

Figure 2.24 presents a photograph of Museum Voorlinden. There are large windows in the museum and the landscape outside of the museum is easily perceived through these windows.

All in all, it is clear that places as urban spaces with opportunities for children to take part in different activities by providing learning environments for children will encourage children to spend more time in the urban spaces of cities and, in turn, be a part of urban life.

2.3.1 Children's Current Relationships with Urban Space

Childhood is significant for the relationships between children and the environment in terms of the fact that negative spatial experiences in childhood have negative effects on their development, which are reflected in their futures (Zeyrek Çepehan

& Güller, 2020). Şimşek (2018) states that perception is the point of departure for experience. Due to the fact that perception depends on factors involved in the relationships between people and places, it is important to consider those factors in order to provide good experiences and contribute to people's quality of life in a given place. Urban places have key roles in contributing to children's quality of life in different areas including recreational, sociocultural, and commercial areas. However, the relationship between children and urban places is generally weak. For example, children need places in cities to develop themselves through play (Bal, 2005; Aksoy, 2011; Şen & Öksüz, 2016). Thus, there should be consideration of the factors necessary for children to receive contributions to their development through urban environments that are properly designed for them.

Old-time neighborhoods had special effects on children's senses (Bilgin, 1984). On the other hand, children cannot readily be a part of modern urban and public spaces or be affected by these spaces (Ataöv & Haider, 2006, p. 128). As Zeyrek Çepehan and Güller (2020) state, there are limited spaces for children in cities. Lang (1994) observes that watching television has become a major activity of children, and this has effects on their connection with outdoor spaces. In a similar vein, Bilgin (1984) states that children are now spending more time in private spaces such as residential and educational facilities. Lang (1994) notes that older cities provide a greater diversity of opportunities that inspire children to give various responses to the environment and, in turn, enjoy different experiences for individual exploration, which is a factor in children's relationships with places. Overall, children have begun to lose their connections with public and urban spaces, which are the places that host the social interactions of cities. Children spending more time in limited places engaged in specific activities is an important problem of cities in the twenty-first century. This situation should be considered carefully in this modern era where children have less integration with urban places and individual learning is gaining more importance (Ataöv & Haider, 2006; Karadeniz, Durmaz, Kimzan, & Acer, 2019).

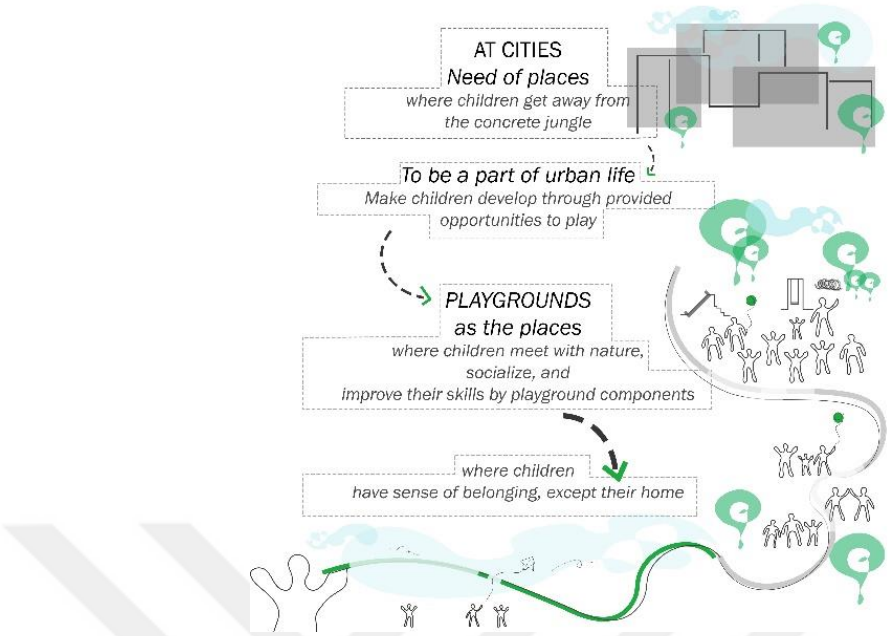


Figure 2.25. Children as part of urban life, adapted from Bal (2005), Aksoy (2011), and Şen and Öksüz (2016).

Figure 2.25 highlights the need for places where children can play and improve their skills through play in cities (Bal, 2005; Aksoy, 2011; Şen & Öksüz, 2016). It is significant to consider this need in these times when children are users of limited places within cities. Chawla (2001) states that traffic dominates the urban streets, and it is important to increase the space devoted to green areas, which are particularly valuable places for children. There is a need to provide safe, natural, enjoyable, social, and educational places for children. Playgrounds are places where children can be introduced to nature, participate in social interactions, and gain contributions to their skills (Bal, 2005; Aksoy, 2011; Şen & Öksüz, 2016). By these means, children develop a sense of belonging to a new place as public space in addition to their homes as private space, and thus they become a part of urban space.

From the beginning of this new century, children have been losing their connections to cities, becoming stuck in more narrow locales such as particular residential or educational places within their cities. The need for children to engage with and benefit from other places in cities has accordingly started to emerge. As Zeyrek

Çepehan and Güller (2020) argue, there is a need for appropriate places for children that are free and easily accessible, experiential, and supportive of their skills. There is potential for both indoor and outdoor urban spaces to contribute to children's development through diverse spatial features as both built-up and natural areas. For example, Kalkanlı (2019) states that streets provide learning by means of stimulation through environmental attributes such as wind, sun, and the general climate. The relationship between children and urban places needs to be strengthened so as to make them use urban spaces effectively and thus make children a part of urban life, being more willing to use public spaces instead of private spaces and benefiting from opportunities in cities' diverse places to support their development.

Museums are significant urban spaces contributing to children's learning of art and culture through their indoor and outdoor settings. The next chapter explains the learning of art within the scope of learning at museums.

CHAPTER 3

MUSEUMS AS ENVIRONMENTS FOR CHILDREN TO LEARN ABOUT ART

This chapter explains museums as learning environments for art. First, it addresses the concept of learning environments together with learning theories. In this regard, the specific learning of children is another important topic. It is necessary to understand how children learn as they have different needs and demands compared to adults. Accordingly, they receive unique effects from their surrounding areas. Art itself is the second main focus of this chapter due to the emphasis in this thesis on the relationship between the spatial characteristics of a place and children's learning of art. Thus, the second main section of this chapter explains the relationship between art and children, and the place of art in children's life. Finally, children's learning of art at museums is the last main topic of this chapter. This thesis considers museums as informal learning environments of the arts. For that reason, explanations of their educational aspects and how children learn about art in these places are significant points to be addressed at the end of this chapter.

3.1 The Learning of Children

According to the Merriam-Webster online dictionary, there are many meanings of "learning," such as acquiring knowledge or skills, or experiencing new things. John Dewey held that learning stems from relationships between the environment and the person, and experiences gained by doing (Ord & Leather, 2011, p. 13). In a similar vein, learning can be defined as making meaning based on what children gain through their perceptions and experiences in a place (Ataöv & Peker, 2020, p. 37). Moreover, Ataöv and Peker (2020) argue that learning through the use of senses is of particular importance in the childhood period. This study focuses on children's learning of art and culture within museum settings and so it is important to explain

the particular features and ways of learning to understand the contributions of the chosen settings to children's learning of art and culture within the scope of this study.

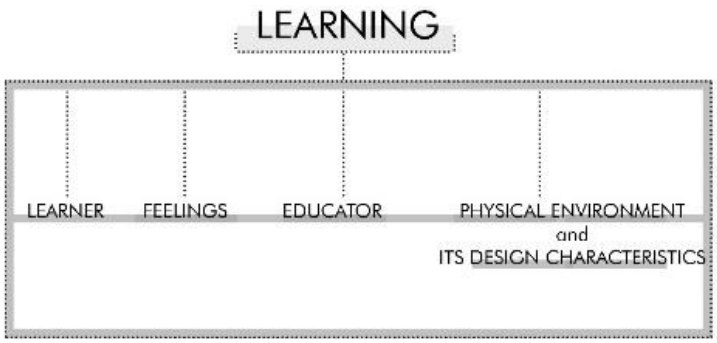


Figure 3.1. Components of learning, adapted from Peker and Ataöv (2019).

Figure 3.1 represents the components that have effects on learning. Learning has a context that consists of the learner, feelings, the educator, the physical environment, and that environment's design attributes. Learning takes place within a social context (Hein, 1991, p. 3). Peker and Ataöv (2019) emphasize that learners and educators are two of the components triggering learning according to scientific works. Thus, there should be interactions between learners and educators for learning.

Moreover, learning is represented by developments in different areas including cognitive and emotional developments (Johnson, 2000, p. 3). Jean Piaget explained the process of gained knowledge by considering the concept of development (Akarsu, 1984). For Piaget, development was a transformation of instinctive behaviors to tangible acts and then to intangible thoughts rather than the accumulated product of achievements (Akarsu, 1984). Thus, fractional steps of development can be seen in Jean Piaget's ideas (Lillard, 2013, p. 57).

3.1.1 Learning Theories

Learning is a process that consists of behavioral, cognitive, and emotional developments and it continues throughout life (Yıldırım, 2015). Peker (2010) states

that there are different ways of learning, and these different ways of learning are affected by the application of different learning theories (Fairbanks, 2021). Within the scope of this study, it is important to search for diverse opportunities for learning as each child forms his or her own relationship with place in distinct ways due to the diversity of personal features. Thus, the ways of learning and learning theories have an important place in this study.

Various different learning theories have been presented in the literature, including behaviorist, social, and experimental learning theories. This thesis focuses on spatial attributes triggering children's emotions, the active use of their senses, and their experiences gained in museums. A variety of experiences can be supported by activities in conjunction with museum exhibitions (Ásványi et al., 2021). For instance, there are art objects both indoors and outdoors at the building of Ankara's Presidential Symphony Orchestra (CSO), providing people with diverse experiences and feelings in different settings while they perceive the attributes of these settings by making use of their senses, which is essential for place perception. The body elicits experience (Adıgüzel Özbek & Ertürk, 2017, p. 81), and so human components as variables are just as important in this study as spatial components. This thesis aims to explain the relationship between settings and children within the context of their affective states as another human component. Thus, learning which emotions play important roles in this process is important in this thesis.

Peker (2010) explains that behaviorist learning theory aims at understanding simple behaviors, and behaviorists define classical and operant conditioning as two different processes in people's processes of learning. The difference between them is that behaviors are voluntary in the context of operant conditioning and involuntary in classical conditioning (Cherry, 2023). Peker (2010) also notes the shortcomings of this approach, as there is no consideration of personal features such as emotions and thoughts in the learning process, and it does not explain the ways of collecting information. However, people process information mentally according to mental components such as their emotions, thoughts, and experiences within the scope of cognitivist learning.

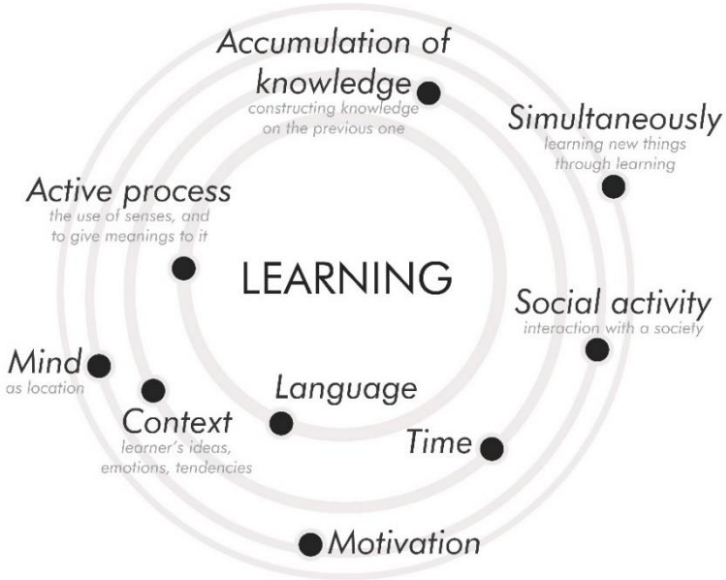


Figure 3.2. Principles of constructivist learning, adapted from Hein (1991).

Figure 3.2 illustrates the principles of constructivist learning. Hein (1991) explains that learning takes place in the mind and consists of an active process through which learners learn by using their senses and giving meanings to what they perceive. According to constructivist learning theory, learning is a continuous process entailing organization and development, and it is the outcome of activities (Fosnot & Perry, 1996, p. 28). Thus, the process is important, similarly to the cognitive theory of learning. In humanistic learning theory, the particularities of a person are of considerable importance. Peker (2010) states that, in contrast to behaviorist and cognitivist theories, emotions and feelings are prominent in the course of receiving information and responding to the environment. People function as emotional entities while they are thinking. Khatib, Sarem, and Hamidi (2013) emphasize that a person is a human first and then a learner, respectively. Connectivist learning theory considers the updating of knowledge and the filling of its gaps while transformative theory focuses on learners who are adults and changes in their worldviews as a result of experiences, knowledge, and critical reflection (Fairbanks, 2021). The approach of social learning theory is similar to that of behaviorist learning as classical and

operant conditioning both have impacts on shaping people's behaviors (Peker, 2010). During the development of skills, children find opportunities to interact with each other and so they contribute to their own learning by means of socialization.

Another relevant theory is experiential learning theory, which was developed by John Dewey (Şensoy & Midilli Sarı, 2019, p. 445). Dewey emphasized the environments of children and experience, as explained by Johnson (2000, p. 9), who further notes that this type of learning is hands-on and requires outdoor environments capable of supporting hands-on experiences. This kind of learning consists of activities taking place in a physical environment and the experiences gained from those activities. Experiential learning is beneficial for students in terms of providing opportunities for implementing knowledge, teamwork, and motivation through enjoyable and experimental activities that are preparatory for the real world (Western Governors University, 2020). Moreover, as Ord and Leather (2011) explain, experiential learning plays a vital role in learning outdoors and so outdoor settings possess potential for learning.

Figure 3.3. Indoor setting designed for children at a shopping mall.

Figure 3.3 provides an example of an indoor square hosting an activity area for children within a shopping mall. There are educators inside the activity area. Children participate in different activities and achieve learning outcomes by interacting with the educators and with other children. One part of the activity area consists of a kitchen simulation. Thus, children have an opportunity to engage in

real-life experiences with others with the help of the educators through this simulation and its spatial characteristics.

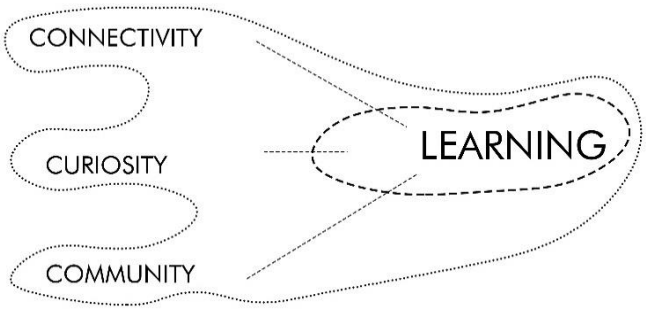


Figure 3.4. Components strongly affecting learning, adapted from Nourjian (2006).

Nourjian (2006) emphasizes that connectivity, curiosity, and community are important components for learning. Furthermore, it can be deduced from Figure 3.4 that attributes belonging to both place and people have importance. Explorable environments trigger people's curiosity. People are social, thinking, emotional, and acting entities. The stimulation of their different components has an impact on their learning, and stimulations that are appropriate for particular components have particularly positive effects on individuals and their development. For example, good relationships with other people make children more respectful of others by means of supporting their social and emotional characteristics.

In addition, Bloom's taxonomy presents sophisticated types of thinking in education, such as the evaluation of concepts and processes, and three domains of learning, which are the cognitive, psychomotor, and affective domains (Zhou & Brown, 2017). Bloom et al. (1956) contend that the cognitive domain is associated with the remembering of knowledge and the improvement of intellectual skills while the second domain consists of changes in interests and values, and the third is related to motor skills. This is significant in attempts to evaluate children's learning within the scope of human components.

There is a diversity of theories addressing issues of development. This thesis aims to explain the effects of perceived spatial attributes on children's learning while considering both affective components, as a category of human components, and spatial components. Thus, particular learning theories are taken into consideration within the scope of the thesis.

3.1.2 Learning Environments

There are different learning environments in cities. Schools are the main places providing children's learning, and there are other facilities contributing to the learning of children. It is important to consider the different learning environments of cities and ways of learning in evaluating the environment's contributions within the context of experience gained in a given environment. Moreover, children can use different learning environments of cities and become a part of urban life.

Museum visits with others or individually have effects on the learning of art and culture in both formal and informal ways. While formal learning is systematical, planned, and intentional learning, informal learning is the opposite, continuing throughout life (Mutlu Kaya, 2020, pp. 12-13) and happening in a spontaneous way (Eshach, 2007, p. 173). As Mutlu Kaya (2020) states, there are non-formal learning environments existing outside of school. It is easy to understand the learning that takes place outside of school within the two separate categories of informal and non-

formal learning (Eshach, 2007, p. 173). Non-formal learning is arranged by giving attention to preferences and it is intentional (Mutlu Kaya, 2020, p. 13).

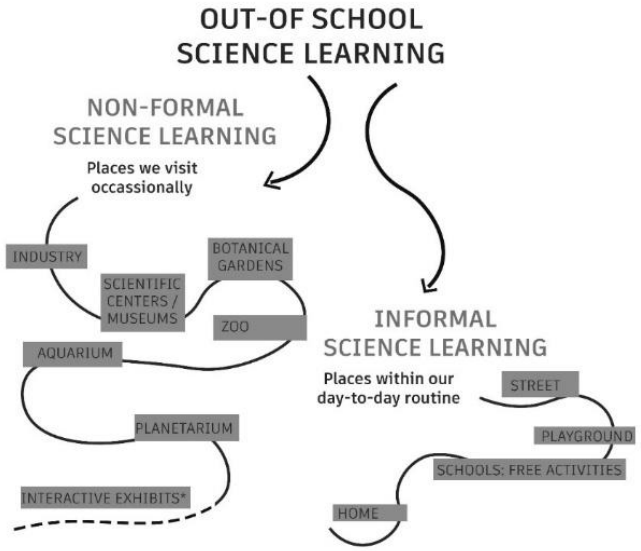


Figure 3.5. Out-of-school science learning, adapted from Eshach (2007).

Figure 3.5 presents the contexts of non-formal and informal learning environments.

Buyurgan (2019) states that education taking place outside of school provides opportunities for students to make choices according to their interests and skills, which supports permanent learning in comparison to formal learning.

There are different dynamics involved in the definitions of formal and informal learning. For Eshach (2007), defining informal learning as out-of-school learning is too simplistic; rather, there is a difference between non-formal and informal learning, which lies in the frequency of visiting a place. Informal learning has the potential of happening at a non-specific time within a day and in different places according to Eshach (2007): “We can distinguish between two institutions where non-formal learning takes place: Those that possess hands-on exhibits, and those that include interactive exhibits as well” (p. 174). Çağlar (2019) mentions that there is potential to support the knowledge of children through observation and hands-on activities at

museums. Lynch (1960) argues that there is always a new corner awaiting to be discovered. Thus, museum settings offer opportunities for people to explore and learn through diverse activities both together and on their own.

Lang (1994) states that informal learning occurs with interactions between people and places in daily life. The places providing opportunities for social interactions are potential places of informal learning. Learners and educators engage in interactions with each other, which contribute to informal learning, by sharing their ideas and other tangible values. In a similar vein, Madanipour (2003) explains that public spaces host interpersonal relations. In this study, activity and circulation areas as public spaces are examined in terms of children's use of them. School gardens, cafeterias, and circulation areas are learning environments that are just as significant as classrooms (Şensoy & Midilli Sarı, 2019, p. 443). Peker and Ataöv (2019) stress that students look for alternative places for learning on campus, which can provide both indoor and outdoor learning environments. For instance, they mention that public spaces, cafeterias, and student societies are considered to be informal learning environments. Similarly, Çağlar (2019) states that streets, playgrounds, and conversations among peers contribute to children's learning in an informal way.

3.1.2.1 Spatial Attributes of Learning Environments

Baksi (2018) emphasizes that a place transfers data to the sensory organs through several stimuli, resulting in the development of a perception of place. The development of place perception provides a strong relationship with the place in question, allowing the person to receive more effects from more perceived attributes of that place and, in turn, supporting an effective learning process. People perceive the attributes of a place by using their senses. Baksi (2018) states that the architectural components of a place and color, pattern, and light, which provide definition and direction at the place, have impacts on people's senses. For instance, they can perceive the heat of hot water and the glass the water is held in by using their senses. Here, the stimuli are the form of the glass and the heat of the water. It is important to discuss the spatial attributes of places where learning occurs in order to explain their effects of the perceived attributes of that place on learning.

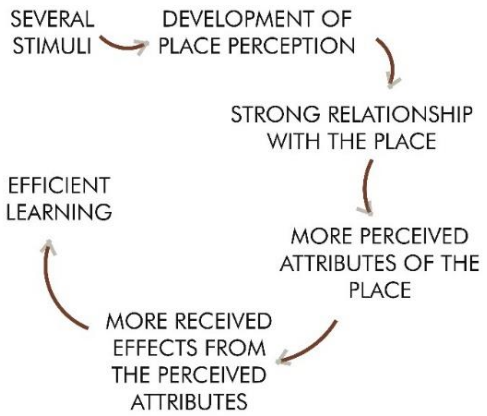


Figure 3.6. Effects of stimuli on perception and, in turn, learning.

Figure 3.6 shows the effects of the development of place perception on efficient learning by means of several stimuli. Greater development of place perception creates a stronger relationship with the place. That development elicits more

perceived attributes from the place; accordingly, the individual receives more effects from it. Learning is one of the outcomes of these effects.

Color

Baksi (2018) states that the effects of structural components are supported by the components of stimulation; in this sense, color, pattern, and light emphasize the physical structures located in a space and increase the spatial quality. Color facilitates emotional processes and aesthetic concerns by means of its effects of stimulation, and it supports functions such as emphasizing, interpreting, and identifying (Baksi, 2018).

Figure 3.7. Seven Magic Mountains (Anonymous, n.d.). Retrieved from: https://sevenmagicmountains.com

Seven Magic Mountains is an example of both land art and public Art (*Timeline*, n.d.). Orhan (2021) states that the place itself is an example of a work of art. Özsavaş Uluçay (2019) explains that land art is integrated with the place and there is efficient use of that place; thus, the place becomes a work of art. Color is especially prominent in this work, and Baksi (2018) states that color is an important element of design. In the case of Seven Magic Mountains, the place identifies the space, which is located in the Nevada desert off Interstate 15 (*Timeline*, n.d.), and it draws visitors' attention by defining the space through colorful objects. There is a possibility that the place can make contributions to people's relations with art and culture by means of itself.

Thus, this place becomes a learning environment for art and culture. Moreover, it is open to the public with the aim of providing people with connections to the place both now and in the future (*Ugo Rondinone Seven Magic Mountains: A large scale desert art work Las Vegas, Nevada*, n.d.; *Timeline*, n.d.). The acts of visitors affect the use of the place and thus its vitality due to the fact that place is made to exist by people (Adıgüzel Özbek & Ertürk, 2017). Within the scope of this study, it is relevant that the place where the work of art is located, its components, and people are all important for sustaining the vitality of the place, supporting the development of people's understanding of art and culture, and transferring art and culture to further generations of people. Seven Magic Mountains is a good example of a place that is a learning environment of art and culture in itself.

Another function of color is emphasizing patterns. Rasmussen (1959) describes the gathering of light-colored painted stones and black walls that grow darker due to smoke for the façade of a house in London to form a textural effect.

Figure 3.8. Houses at Bedford Square (Anonymous, n.d.). Retrieved from: https://www.sothebysinstitute.com/news-and-events/news/the-history-of-our-home-bedford-square

Baksi (2018) explains that tactile patterns are a form of stimulation for people and trigger feelings such as heat and rigidity. For instance, grass has a soft pattern and provides opportunities for people to engage in different activities. Peker and Ataöv

(2019) state that students find grass comfortable for sitting and learning. Within the scope of this study, due to the importance of open spaces for children's development, the use of grass should be considered in these spaces in order to amplify the contributions of the place to their learning. Peker (2010) asserts that spatial designers should give importance to ensuring the right stimuli for students to be able to concentrate. In addition, patterns provide the relations between materials and places, which is important for the perception of an architectural place, and a wide variety of patterns in a place may result in feelings of division there (Baksi, 2018). Therefore, it is important to provide appropriate variety in materials for spatial designs. Moreover, materials can be evaluated in terms of their softness and the permeability of heat (Rasmussen, 1959). Thus, it is important to discuss the patterns of materials in terms of softness and permeability of heat to ensure a comfortable learning environment. Rasmussen (1959) notes that wood does not allow instant alterations of heat. Therefore, stimulation has effects on both structures and people, and spatial design approaches should consider the effects of stimulation on both structures and people.

Figure 3.9. YNS Yamaikarashi Nursery School (Koji Fujii/TOREAL, n.d.). Retrieved from: https://www.archdaily.com/988741/the-center-for-early-childhood-education-and-care-takeru-shoji-architects?ad_source=search&ad_medium=projects_tab

The nursery shown in Figure 3.9 has a wooden structure, so the balance of heat is protected. In turn, a comfortable learning environment is provided for the children.

Figure 3.10. Building of the Presidential Symphony Orchestra in Türkiye.

The use of wooden materials can ensure that a place is warm enough. Thus, it ensures a comfortable environment.

Peker and Ataöv (2019) note that layout, flexibility, color, size, and accessibility are physical attributes of a setting while other attributes are psychological, related to the needs of the person, with seven environmental design attributes having impacts on students' learning indoors according to previous studies. Similarly, Lillard (2013) highlights the role of the color of walls on the development of children. Thus, the color of objects in a place affects children's development.

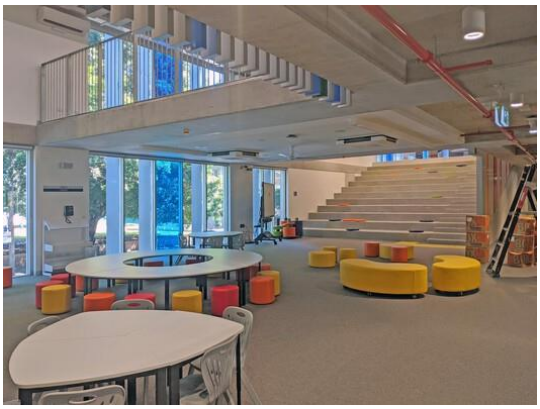


Figure 3.11. Ultimo Public School (Brett Boardman, n.d.). Retrieved from: https://www.archdaily.com/978467/ultimo-public-school-designinc-plus-lacoste-plus-stevenson-plus-bmc2-architectes

Abdel (2022) highlights the flexibility and connectivity of learning environments in schools by means of colorful chairs that can be located anywhere to form a learning environment indoor, with connections between indoors and outdoors, directing people to use outdoor spaces as learning environments and, in turn, providing the maximization of the usable spaces in a school.

Light and Shade

Light is an important stimulus due to the fact that it allows for perceptions of the colors, forms, and patterns of objects. The particularities of an object cannot be perceived in places where there is no light. As defined by Baksi (2018), light has many effects on a place, including the definition and the limiting of it, and there are also impacts of light on people's behaviors, emotions, and communications. For example, tall trees provide shade for a place. Peker and Ataöv (2019) stress that shaded places provide comfortable learning environments by protecting students from the heating impact of the sun. The sun is a natural light source; there are also artificial light sources, and they have effects on learning, just as natural light does. Peker and Ataöv (2019) state that artificial lighting supports the use of open spaces. Thus, it is important to provide artificial lighting in open spaces to ensure that learning environments can be used at any time of the day. Furthermore, scientific

experiments produce diverse feelings of stimulation among people and allow them to learn by sensing and doing. For example, light is a subject in the field of physics, and experiments addressing this subject help students learn effectively by directing them to use their sense of sight. Thus, there is a possibility of light supporting learning just as there is a need for lighting to see properly. Rasmussen (1959) states that people need more lighting if they cannot see something sufficiently, although the insufficiency of the light may be due to the fact that the quality of the light has more importance than the quantity. For example, Rasmussen (1959) describes a colorful carpet receiving light from a large window on the side wall of a concert hall in Gothenburg. In this example, it is not important to ensure that all parts of the surface of the carpet receive equally sufficient lighting because the carpet is a part of the space, not working as a sculpture. Thus, the location of the light source is important in perceiving the color and pattern of the carpet properly. Rasmussen (1959) emphasizes that lighting coming from one or a number of sources and reflecting in some way can ensure that form and pattern are shown in the best possible manner. Thus, light is an important sensory factor of learning environments through its qualitative and quantitative attributes and its effects on color, pattern, and form as physical attributes of the place.

Figure 3.12. Melodier vid torget (Melodies at the square) (Anonymous, n.d.). Retrieved from: https://www.gso.se/upptack/podiet/xet-pa-tvattlinan/

Sound and Smell

Sound and smell are other sensory factors of learning environments. They have impacts on concentration and learning in the course of activities involving sound and smell, similar to the case of light. On the other hand, there is also a possibility that sound and smell as external factors of a situation may interrupt the learning process by distracting people. Thus, these sources of stimulation have positive and negative impacts on learning and on learning environments. In addition, there are impacts of architectural components on the sound of a place. For instance, Rasmussen (1959) explains that ceramic as a material for floors and walls or porcelain sinks and bathtubs filled with water reflect the sound of a place. The use of materials should be considered to help learners hear the sound of a place more easily.

Baksi (2018) states that the physical features of a space provide an important system of stimuli for people by affecting the visual quality of the space. Similarly, as Orewere and Ogenyi (2019) note, the landscape may enhance the environmental quality of a place and support the physical and mental health of people. For instance, trees help students learn in a more comfortable way by protecting them from the sun's effects and providing shade on sunny days, while fresh air has positive effects on learning (Peker & Ataöv, 2019). Thus, it is important to provide natural components in learning environments. In this case, landscape becomes prominent as a physical factor of learning environments.

Landscape Elements

There are landscape elements on different scales ranging from terrariums in homes to vertical gardens (Şentürk and Altınçekiç, 2018). The spaces of landscapes are designed according to basic design principles such as balance, focalization, and rhythm (Orewere & Ogenyi, 2019, p. 29). These elements can be considered within the two categories of soft and hard landscapes regarding their application and formation (Orewere & Ogenyi, 2019, p. 20). Hard landscape elements provide recreational opportunities in open spaces (Şentürk & Altınçekiç, 2018). These elements can be categorized as horizontal or vertical hard landscape elements; the

horizontal ones are the base elements of space while buildings, trees, and sculptures are examples of vertical ones (Şentürk & Altınçekiç, p. 329).

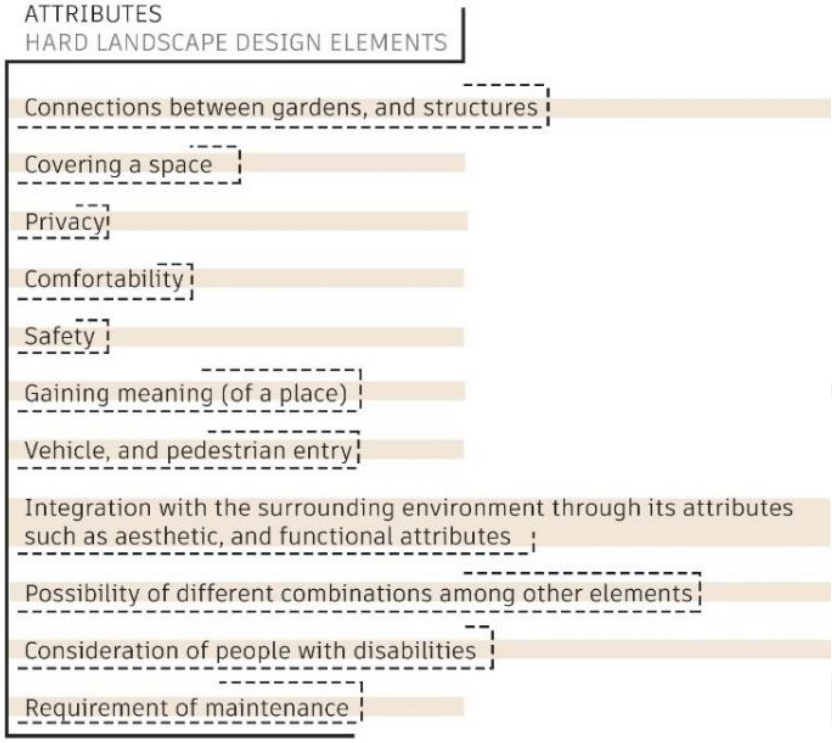


Figure 3.13. Attributes of hard landscape elements, adapted from Şentürk and Altınçekiç (2018).

Figure 3.13 presents the attributes of hard landscape elements. For example, Şentürk and Altınçekiç (2018) state that aesthetics makes a place attractive for people's participation in various activities.

Figure 3.14. Colorful Blue Seats (Anonymous, n.d.). Retrieved from: https://www.contemporist.com/seating-added-to-make-sitting-on-stairs-more-comfortable/

Figure 3.14 illustrates how stairs can be places for sitting, reclining, and chatting.

Landscape elements increase not only the functionality of the environment but also its visual quality. Şentürk and Altınçekiç (2018) note that the visual quality of an environment is supported by art products. For instance, sculptures are among the art products that support the visual quality of an environment. They draw people's attention to the environment and make people want to look at them to comprehend the details of these art products.

Figure 3.15. Isabella Stewart Gardner Museum (Lloyd Mallison, n.d.). Retrieved from: https://www.bostonmagazine.com/arts-entertainment/best-museums-in-boston/

Figure 3.15 offers an example of a sculpture as an object-based spatial component located in the courtyard of the Isabella Stewart Gardner Museum. There are also soft landscape elements that attract people, which subsequently increases the possibility of people being affected by the place.

In addition, performances occurring among hard landscape elements make a place dynamic by attracting people's attention (Şentürk & Altınçekiç, 2018, p. 336).

Figure 3.16. Outdoor concert at North Carolina Museum of Art (Anonymous, n.d.). Retrieved from: https://ncartmuseum.org/events-and-exhibitions/programs/performances-and-concerts/

Hard landscape elements in places such as those shown in Figure 3.16 may host different social activities such as sitting together, watching, and making music.

Shelters, playgrounds, street art, and designs located within squares and on streets are other examples of hard landscape elements (Şentürk & Altınçekiç, 2018, p. 337).

Figure 3.17. Knitted works placed on trees on a street.

Figure 3.17 illustrates knitted works as examples of a hard landscape.

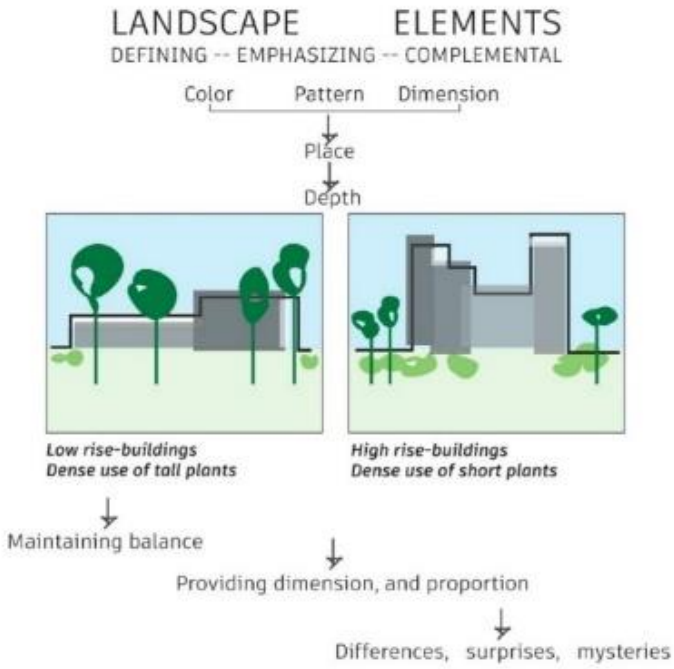


Figure 3.18. Impacts of landscape elements, adapted from Çolpan Erkan (1996).

Figure 3.18 illustrates the impacts of landscape elements on a place. Trees, shrubs, and shorter plants maintain the balance of the place's open and closed parts and they

imbue the place with dimension and proportion with the use of different colors, patterns, and dimensions (Çolpan Erkan, 1996, p. 49).

Figure 3.19. Brooklyn Bridge Park (Sygic Traveler, n.d.). Retrieved from: https://travel.sygic.com/tr/poi/brooklyn-koprusu-parki-poi:34990

As Çolpan Erkan (1996) notes, the proportions of landscape elements affect the ways in which landscape spaces are used. For instance, people can use green spaces by lying on large areas with grass or reading a book under a tree. Moreover, the organization of landscape elements has different effects on the use of green space in terms of activities. A tree captures people's attention in its singularity and establishes diverse spatial separations (Çolpan Erkan, 1996, p. 52). Furthermore, circulation areas are defined by trees and other landscape elements and these landscape elements direct the movement of people toward the other functions of the area accordingly (Çolpan Erkan, 1996).

Moreover, the location of green areas has importance in terms of pedestrian roads. For example, Peker and Ataöv (2019) note that areas located close to main pedestrian roads of campuses contribute to "coincidental learning." Thus, circulation areas' locations with respect to other open and built-up spaces are important in terms of their contributions to people's acts. The areas surrounding main pedestrian roads host a high density of human circulation. Therefore, the possibility of interaction between people increases with this density. Peker and Ataöv (2019) describe the

relation between quietness and the location of areas by giving the example of noisy places located close to commercial areas. These situations will affect learning.

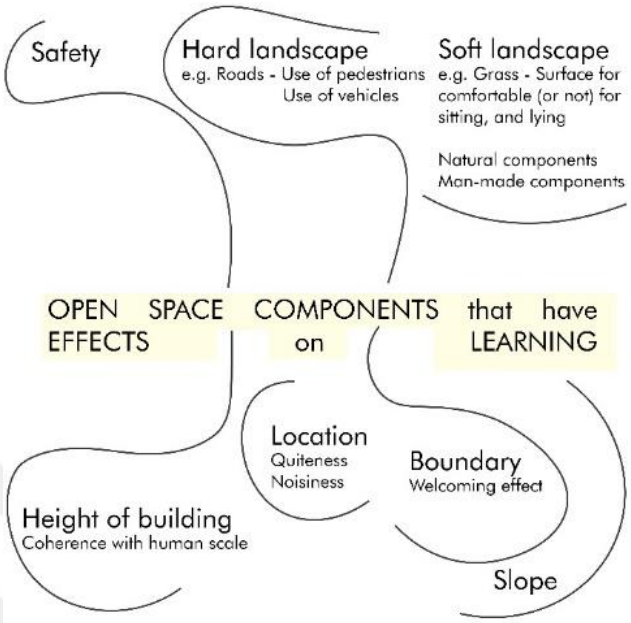


Figure 3.20. Open space components affecting learning, adapted from Peker and Ataöv (2019).

Figure 3.20 highlights the design attributes of open spaces, which have impacts on informal learning. Therefore, these design attributes on different scales are important for social interactions. Nourjian (2006) states that attractive and connective places drive people to come together, socialize, and share their backgrounds that consist of ideas, culture, and knowledge. These places support learning environments in good light. Attributes related to perception, indoor and outdoor learning, and the effects of a place on the children's use of that place are the variables considered in the present study to explain museum settings' effects on children's learning of art and culture.

Figure 3.21. A child painting the hard surface of a school garden.

Figure 3.21 presents a hard surface as a component of an art learning environment using the pavement, chalk, and colors. Thus, there is potential for hard landscape components to become a learning environment.

Buildings/Blocks

Buildings are physical factors of learning environments. Their sizes, functions, and architectural components such as the façade and materials are a building's particularities. These all have impacts on physical factors. For example, there is a possibility that sloped surfaces and vertical walls will help children learn how to play with balls (Rasmussen, 1959). Other examples are the opportunities for children to play in squares and streets. The size and the pavement material are significant components of these open spaces, similarly to the role of buildings. The layouts of spatial designs are important in this regard. Architectural components can provide learning environments on different scales.

Figure 3.22. Children playing on a street (Anonymous, n.d.). Retrieved from: https://londonplaystreets.org.uk/about/london-play/

Accessibility

Accessibility is another important spatial component. It ensures access and the ability to benefit from the services offered by a place. Accessibility is a broad concept ranging from pedestrian accessibility to the accessibility of outdoor spaces. This study evaluates both indoor and outdoor spaces. Thus, the accessibility of indoor and outdoor spaces is important in this study due to the possibility of establishing learning environments in diverse places.

Figure 3.23. Ultimo Public School (Brett Boardman, n.d.). Retrieved from: https://www.archdaily.com/978467/ultimo-public-school-designinc-plus-lacoste-plus-stevenson-plus-bmc2-architectes

Figure 3.23 shows that there is accessibility between different indoor and outdoor areas of the Ultimo Public School. There is also accessibility for the local community (Abdel, 2022). This situation leads to the formation of common areas, which increase the possibility of the formation of learning environments. Nourjian (2006) observes that common areas support communication. Thus, the common areas indoors and outdoors should both be given attention in addition to circulation areas as common areas. In addition, there is potential for social relations in activities such as shopping and eating through facilities within the building (Nourjian, 2006, p. 11). Therefore, the facilities and the areas around them should be considered in efforts to provide learning environments in common places.

In summary, stimulation has effects on structures and people located at a given place. Moreover, there are spatial attributes of learning environments eliciting effective learning processes. Thus, there should be consideration of the proper stimulation of the senses and the provision of spatial attributes for enhancing learning at particular places.

3.2 The Relationship Between Art and Children

Children's learning of art is the focus of this study. Within the context of this topic, there is an examination of the importance of art for children, the formation of their understanding of art and culture through perception, the art education provided at educational facilities in cities, and the learning of art within the scope of museums.

3.2.1 Attributes of Art

The Forms of Art

According to the Cambridge Dictionary, "Art is the making of objects, images, music, etc. that are beautiful or that express feelings." In a similar vein, art may be

described as a way of expression and communication (Özsavaş Uluçay, 2017). Walker (2021) argues that the idea of seven primary forms has been redesigned.

Figure 3.24. The forms of art based on data retrieved from: https://www.contemporaryartissue.com/what-are-the-7-forms-of-art-a-complete-overview/. The first, fourth, seventh, eighth, and ninth illustrations respectively present the painting *Taking a Walk near Argenteuil* (Claude Monet, 1875), the book cover of *Cuore*, the play *Cavalleria Rusticana*, the film *The Pursuit of Happiness*, and the building of the Presidential Symphony Orchestra of Türkiye. These images were respectively retrieved from: https://www.oggusto.com/sanat/sanatci/claude-monet-hayati-eserleri-hakkinda-az-bilinenleri, https://www.amazon.ca/Cuore-Heart-english-Edmondo-Amicis/dp/184902281X, https://www.aa.com.tr/tr/kultur-sanat/operanin-vazgecilmez-eseri-cavalleria-rusticana-dobda-perde-diyecek/2444708, https://www.tzv.org.tr/#/haber/5189, and https://eventnews.online/2023/03/14/cumhurbaskanligi-senfoni-orkestrasi-canakkale-zaferinin-108-yildonumunu-kutluyor/

Walker (2021) states that painting is one of the most popular art forms and it has a two-dimensional surface in its implementation. There are different techniques for the implementation of art through painting. Colors, patterns, and shapes are important components of this art form. Each artist comes into prominence with his or her own style, such as Impressionism or Cubism. The second major art form is sculpture and Walker notes that there are different ways of producing sculptures by means of developing technologies. The two examples of sculptures presented here were designed with different approaches. The Trevi Fountain, for example, was built in the mid-eighteenth century (Martini, n.d.). The third form is literature. Walker (2021) states that literature is the art of words, and there are many various types, such as letters, biographies, and poetry. The fourth is architecture. According to Walker, architecture defines an era and is marked by visual art movements' contributions to particular wider art movements, like classical architecture in Greece. The performing arts or theater is another art form. Walker explains that it has dense expressions through emotions and involves the roles of different individuals ranging from actors to stage designers. Film or cinema and music are the other art forms (Walker, 2021).

Uluçay Özsavaş (2017) describes the place of art, whereby place is an object of art, and the art of place, whereby the design of the place is art. For instance, land art is an example of the place of art, while the indoor and outdoor design of a building represents the art of place.

Figure 3.25. Louvre Museum (Anonymous, n.d.). Retrieved from: https://gezicenga.com/louvre-muzesi/

The Louvre Museum is an example of the art of place.

Parameters of Art

Sylva (1988) notes that the use of the parameters of art provides opportunities for relating art experiences and concepts, and developing skills and a clearer set of ideas. Thus, they support learning. She further argues that these parameters have impacts on developing sets of learning at the beginning of the engagement of students with art, improving their accumulated knowledge of concepts and abilities through more sophisticated learning by means of the use of these parameters. All art experiences and the four dimensions of engagement with it, which are creating art, responding to art, historical inquiry, and philosophical inquiry, are fields in which the application of the parameters should occur according to Sylva (1988). Thus, there should be consideration of these parameters in the processes of learning about art.

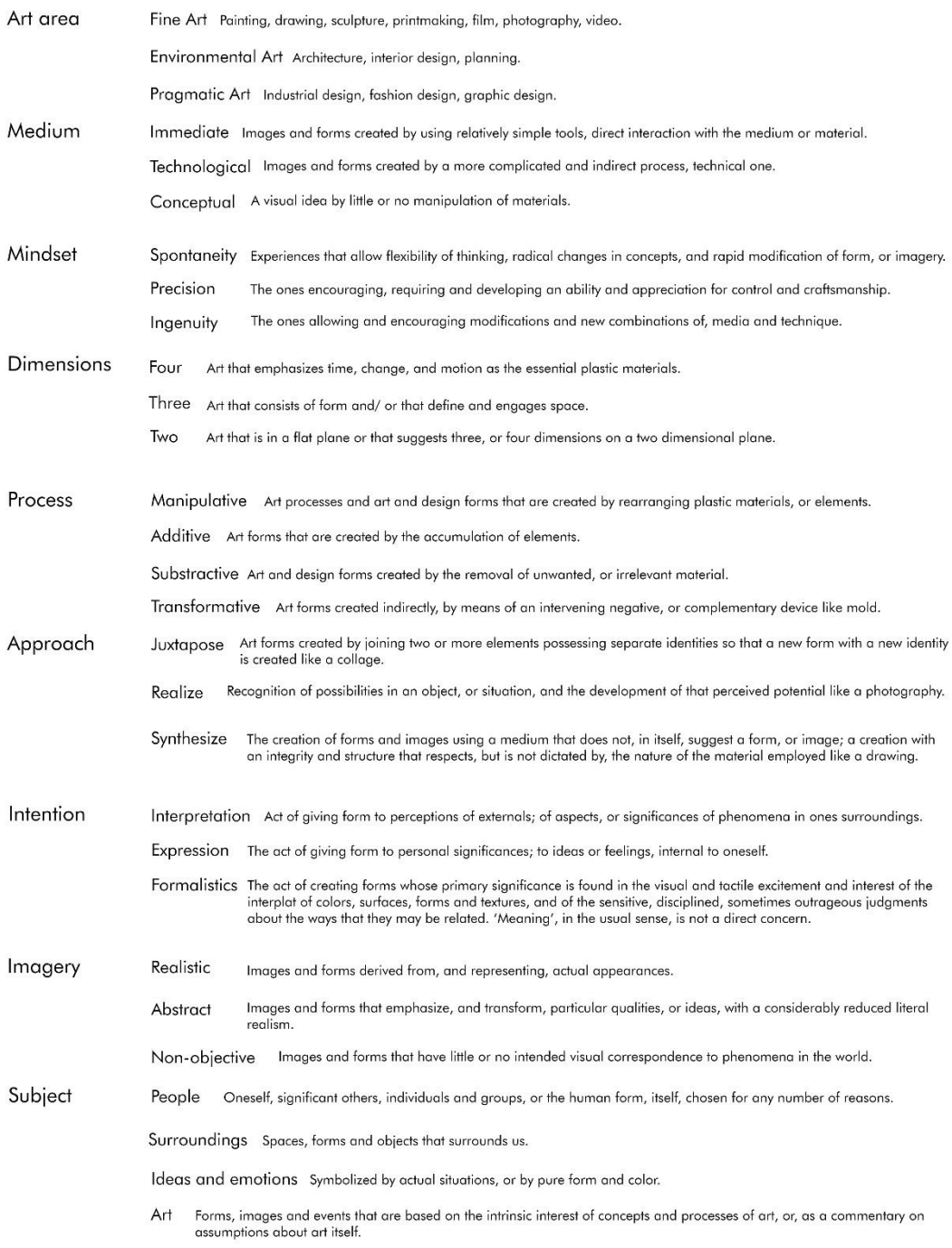


Figure 3.26. Parameters of art, adapted from Sylva (1988).

As illustrated in Figure 3.26, Sylva (1988) describes nine parameters of art.

3.2.2 The Importance of Learning Art for Children

Children's learning of art is the focus of this study. This section examines the importance of art for children, the formation of their understanding of art and culture through perception, and art education provided at educational facilities in cities. In addition to educational facilities, museums have the potential to make contributions to children's relations with art and culture in spatial, social, and mental ways, and their settings are the focal point of the following section.

San (2020) states that in ways of perceiving the world, forms, colors, and the concept of place are important because perception, visual images, and experiences are the basis of creativity. The study emphasizes the perception of a place by children and the contributions of their perceptions to their understandings of art and culture. Thus, the concept of the place and the children's perceptions of it are of high importance in this thesis. Each child comprehends the environment in a unique way due to physical and personal differences. This results in various experiences, different learned knowledge, and diversity in representations of art. Similarly, San (2020) states that there are different, specific expressions arising from different characteristics and expressions of learning. Thus, it is important to evaluate different perceptions of place and representations of art by children.

In the course of artistic activities, children experience the same developmental stages, which are doodling, line drawing, describing and symbolizing, describing realistically, visual realism, regression, and revival in the context of being artists (San, 2020, p. 18).

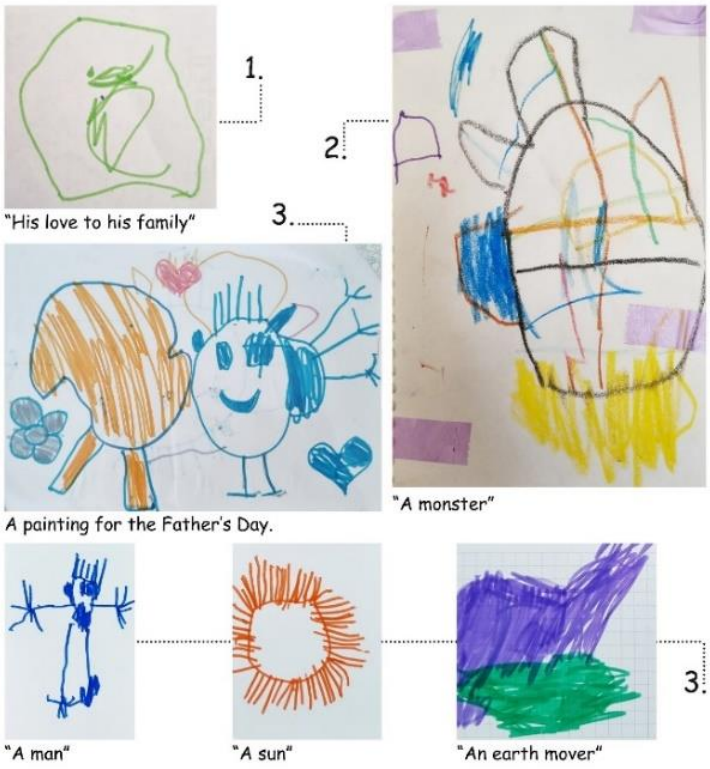


Figure 3.27. An example of artistic development of a child at the age of four.

The drawings presented in Figure 3.27 were done by a 4-year-old child. These three different sets of drawings represent different visuals produced in the earlier, middle, and later months of this child's fourth year of age, respectively. In interviews, the child said that the first drawing represented the love of this family. The second one is a monster with many mouths and yellow legs. The third set includes a representation of his love for his father. There is an increase in the details of the drawings as the months go by and his perceptions of place can be differentiated.

The perceptions of places by children are of importance in this study so as to be able to define the contributions of place to their understandings of art and culture. Thus, it is necessary to focus on the concept of place from children's perspectives. Akarsu (1984) states that, according to Jean Piaget, this concept improves through the different stages of childhood incrementally. Perception is one of the concepts related to mentality. Hein (1991) notes that children's participation in hands-on activities

with physical and mental processes is significant for constructive learning. Similarly, these kinds of activities are important from the perspective of experiential learning, which is based on gaining experiences. There is social learning if these activities are conducted within group settings. Hence, there should be opportunities for the development of children's relations with art and culture by means of different learning theories supporting the effective use of their senses and both mental and physical processes. Ultimately, there will be contributions to their understandings of art and culture by means of the enhancement of their perceptions of places where there are opportunities, in turn strengthening the relationships between them and the places. Most importantly, it should be taken into consideration that children's needs and other criteria should be fulfilled by the place and its own components in order to build strong relationships with the place and allow children to receive contributions from it, such as learning and awareness of skills. It should be remembered that perception is critical in building relations with places and obtaining contributions from them.

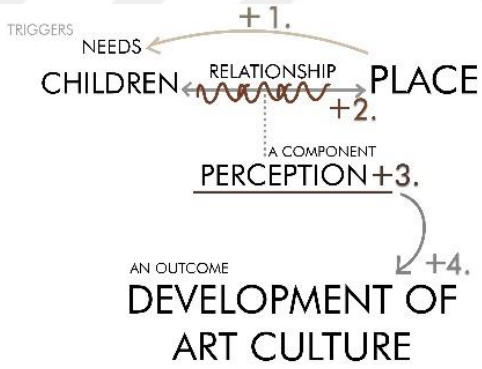


Figure 3.28 Perception and its relation to the development of art and culture.

Figure 3.28 shows how a place can fulfill the needs of children and affect relationships with them positively, as well as their place perceptions. Such a situation

allows children to receive contributions from the place with the development of art and culture.

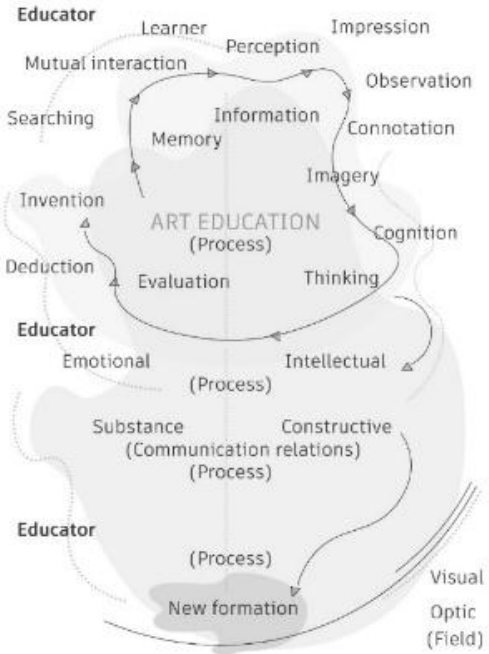


Figure 3.29. The process of art education, adapted from San (2020).

Figure 3.29 represents the components of art education. Art education entails activities that enhance the visual, psychological, aesthetic, and creative characteristics of people. The process of art education continues via the directions of educators (San, 2020). At the end of the process, new formations occur within visual and optic fields.

San (2020) describes education for the arts. This education is important because learning by doing is evaluated as a method of contributing to the learner's understanding of art and culture by considering the process of its production within the scope of the education. San (2020) states that practical production, hands-on training, use of the senses, and creativity are given attention in art education, and this kind of an education allows for a synthesis of cognitive learning and affective learning. Similarly, Aydemir (2010) argues that art education fulfills the cognitive,

sensory, and emotional needs of education, and it enhances perception and imagination for all people. She further states that art education helps people benefit from their accumulated knowledge and skills in different areas of their lives. Gürdal (2007) explains that childhood is the most effective period of life. Thus, it is important to provide opportunities to improve children's learning of art to ensure the continuity of its benefits throughout their lives.

3.3 Children's Learning of Art at Museums

This study's main concern is to evaluate the effects of spatial characteristics of museums on the learning of children. To do so, an explanation of the place of art within museums is necessary. According to the TDK, museums are places or structures that hold and exhibit works of art and science to people. Museums are places of collection, protection, conservation, exhibition, education, enjoyment, and relaxation through their facilities. These places also have functions as archives, educational facilities, research centers, and entertainment centers (Yıldırım, 2015). Thus, museums have educational roles for people by means of their opportunities, and so they are important places supporting people's learning. This section explains the relationship between art and museums, the educational aspects of museums, and children's learning of art at museums, respectively.

Growth and learning are two main components of children's development (Ataöv & Peker, 2020, p. 37). Van Wengen (1979) states that children are dominantly influenced by the environments that their families form in the earlier stages of their lives while different environments other than the initial one play important roles in affecting their lives, such as schools and libraires, as they grow up. This diversity of environments makes contributions to them in various areas such as recreation and education. Museums and art galleries are important learning environments for the education of children (Ünal & Pınar, 2017). In a similar vein, Yıldırım (2015) notes that museums provide learning by making it possible to experience the world we live in for all people. She emphasizes that the learning environments at museums are

interesting and free learning environments. Thus, people find opportunities to support their knowledge of art by choosing their ways of learning about art. There are different ways of learning about art or, in other words, different opportunities at museums. It is significant to clarify the relationship between the arts, culture, and museums for a better understanding of museums' roles as cultural facilities of cities. Van Wengen (1979) notes that the focus of museums has shifted from objects to the public. Demirel (2019) states that arts, reflecting the cultural values of a society, have effects on people's cultural backgrounds and the transfer of them. Museums have roles in showing continuity and changes within the course of life and supporting life-long learning (Demirel, 2019, p. 9). People's backgrounds are changed after visiting museums. They find opportunities to use their senses on tangible things individually for intangible outputs such as emotions, ideas, and knowledge. For instance, a person may improve his or her artistic skills in the realm of Impressionism through art studios where there is education on this painting technique. Thus, it is significant to focus on the educational aspects of museums to understand their effects on learning.

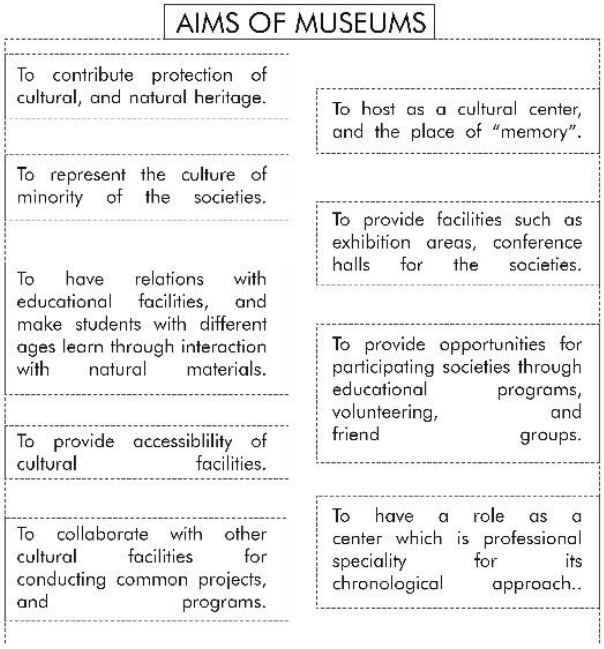


Figure 3.30. Aims of museums, adapted from Bekir Onur (2012) as cited by Buyurgan (2019).

Figure 3.30 indicates that there are many roles of museums, ranging from the protection of heritage to the provision of learning environments.

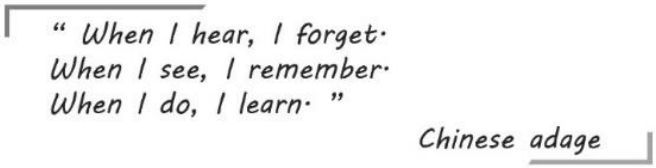


Figure 3.31. A Chinese adage, adapted from San (2020).

Figure 3.31 highlights the importance of learning by doing. The use of the senses plays a significant role in learning by means of doing. Merleau-Ponty (1948) argues that the nature of an artwork necessitates it being seen and heard. Therefore, artworks should offer opportunities for senses to be used in an effective way, as the Chinese adage in Figure 3.31 suggests. Museums are places of various artworks and have the potential to provide access to art and culture for children within their settings. Children have opportunities to express themselves through activities, mental processes, and the components that are present in these settings. Thus, it is important to touch upon the attributes of the art education provided in schools as the main educational facility for children before proceeding further. San (2020) emphasizes the importance of giving basic art education at least in part at specific educational facilities for the arts due to the perspectives on creativity as a separate and lesser human characteristic in comparison to intelligence often found in mainstream educational systems. San defines intelligence as the accumulation of knowledge and learning, and the totality of using them with appropriate competencies under suitable conditions, while creativity is denoted as an expander of these competencies' contexts by new relations established within the information. Some other things that interrupt the process of creativity include paying more attention to rationality, the fear of making mistakes, perfectionism, and various cultural components, perceptions, and emotions. All of these engender obstacles for creativity. Thus, there

is a need for revisions within art education not only at school but also within other facilities.

Museums' perspectives have changed from collecting and exhibiting to ensuring mutual interactions with their visitors since the second half of the twentieth century (Şimşek, Yıldız, & Danacı Polat, 2019, p. 54). Şimşek et al. (2019) note that informal learning through interactions between visitors and their surroundings takes place within personal, natural areas and art studios spontaneously, which turns visitors into participators. Museum pedagogy explores the methods and practices of learning by means of museums, developments in the field of museology, and approaches within the educational sciences to make this concept emerge, and it first arose in the West in the nineteenth century (Aydemir, 2010). According to the International Council of Museums (ICOM): "A museum is a non-profit, permanent institution in the service of society that researches, collects, conserves, interprets, and exhibits tangible and intangible heritage. Open to the public, accessible, and inclusive, museums foster diversity and sustainability. They operate and communicate ethically, professionally, and with the participation of communities, offering varied experiences for education, enjoyment, reflection, and knowledge sharing" (*Museum Definition*, 2022). Thus, museums have educational roles through their diverse functions.

Objects are sources of learning at museums, which is why this learning is based on skills, activities, experiences, and creativity to allow the achieving of the desired outcomes (Aydemir, 2010). Ünal and Pınar (2017) state that one-on-one interactions with objects are important experiences; thus, the learning at museums is related to learning through the physical environment. The use of the senses is an important method for making learned knowledge permanent. Similarly, it is important to stimulate all of the senses for permanent knowledge (Yıldırım, 2015). Hodge (1979) argues that museums are the only places supplying tangible materials through real objects missing from our daily life experiences. Thus, museums elicit permanent learning by means of objects. Moreover, they are places promoting thinking (Kuruoğlu Maccario, 2002). Aydemir (2010) explains that people find opportunities

to develop their visual abilities, shape and form skills, and support their artistic development through exhibitions at museums. Development also occurs through activities such as conferences, story-telling, and touching sessions and in places such as libraries and reading rooms (Kuruoğlu Maccario, 2002). These places have impacts on learning, and so it is important to consider the spatial characteristics of these places to provide effective learning environments. For example, quietness, proper lighting, and the use of colors come into prominence in designing these spaces both indoors and outdoors.

Figure 3.32. Educational facilities at museums, adapted from Şimşek, Yılmaz, and Danacı Polat (2019) as cited by Buyurgan (2019).

Figure 3.32 shows the educational facilities provided by museums. Şimşek et al. (2019) note that variety in these facilities makes museums strong.

There are valuable examples related to different ways of learning at museums. For instance, at the Msheireb Museums of Doha, there are four restored houses transformed into museums introducing the history of Qatar (Qatar Toursim, n.d.). Al-Thani (2018) states that the four heritage houses of the Msheireb Museums Project present diverse themes of Qatar's history and Bin Jelmood is a historical house. Al-Thani (2018) further notes that a booklet for visitors including activities

supports learning through discovering the house and imagining. For instance, the first activity requires a visit to two galleries (Al-Thani, 2018, p. 11). Similarly, the children's art studios at CerModern offer opportunities for museum tours for children and allow the children to express what they have learned in their visits through artistic activities. Johanson and Glow (2012) describe how the Tate Gallery allows children to participate in audiences with the use of their senses. For example, children have the opportunity to hold ice while examining a snowscape (Johanson & Glow, 2012, p. 33). Thus, it is important to provide places that affect the senses and, in turn, allow people to have experiences through the active use of their senses. Urban open spaces offer many opportunities for children's development by acting as the main informal learning environments for children rather than neighborhoods or classrooms (Ataöv & Peker, 2020, p. 58). Thus, there should be consideration of museums' open spaces. These spaces should provide stimulations that have positive effects on personal attributes like triggers to ensure that children build relationships and obtain the desired learning outcomes. For example, Kalkanlı (2019) states that there should be opportunities outdoors for children to conduct research and experiments in their surrounding environments. Curiosity and exploration are among the important triggers of children, and stimulating these triggers will support their personal attributes and help them to develop themselves.

Museums are considered as learning environments in this study. Eshach (2007) states that schools and museums should be integrated together by providing museum-sponsored activities in classrooms. There should be a wholistic perspective of learning that emphasizes both in-school and out-of-school learning (Eshach, 2007, p. 188). Museum visits support the knowledge accumulated by children up until the day of the visit and allow them to have experiences in these places. Falk and Dierking, as cited by Rennie and McClafferty (1995), recommended the interactive experience model for explaining the use of museums and other informal learning environments. Similarly, Karadeniz (2013) states that interactive museums have been steadily coming into prominence since the second half of the twentieth century.

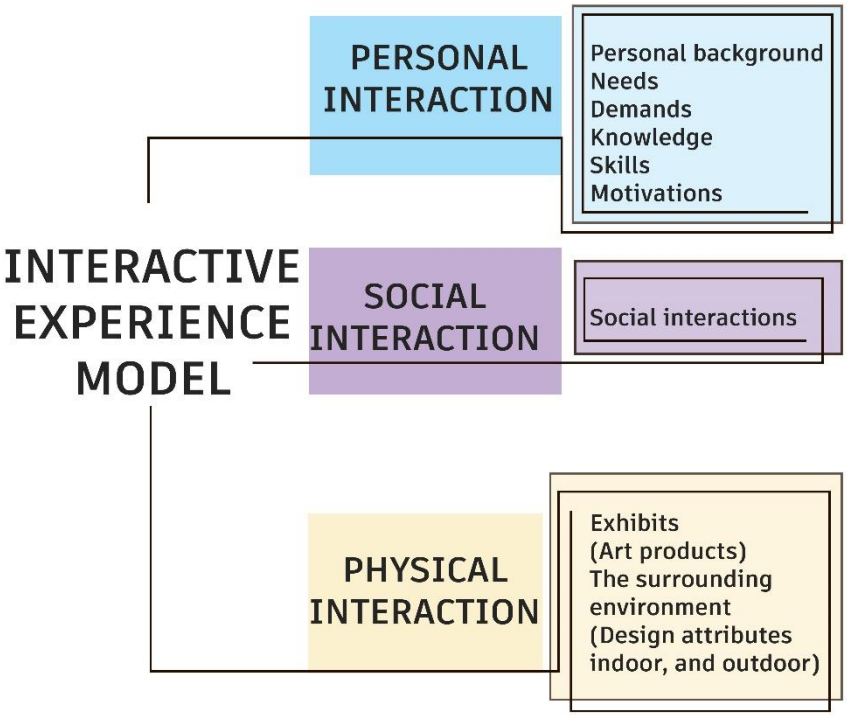


Figure 3.33. Interactive experience model, adapted from Rennie and McClafferty (1995).

Figure 3.33 presents the interactive experience model first suggested by Falk and Dierking. Some revisions have been made according to the focus of the present study, which is museum settings. In addition, as explained by Rennie and McClafferty (1995), the learning process is affected by various factors such as pre-experience in terms of visits and the accumulated knowledge of students.

Moreover, Rennie and McClafferty (1995) describe the importance of using diverse ways of helping students to understand and learn due to the variety of their skills. They furthermore argue that it is important to provide free time for students to explore the environment. Socializing is another aspect of visiting that contributes to students' abilities to form relationships and share with each other (Rennie & McClafferty, 1995, p. 14).

Çağlar (2019) notes that museums provide experiential learning through activities, which helps students who are observing the environment freely follow certain regulations in a non-formal learning environment. By means of experiential learning, students have opportunities to use their senses effectively, gain experience, and develop social skills by sharing perceived attributes and other intangible things such as knowledge and ideas, which opens possibilities of triggering their curiosity to learn and experience new things and accordingly helps them become more motivated and successful (Çağlar, 2019, pp. 15-16).

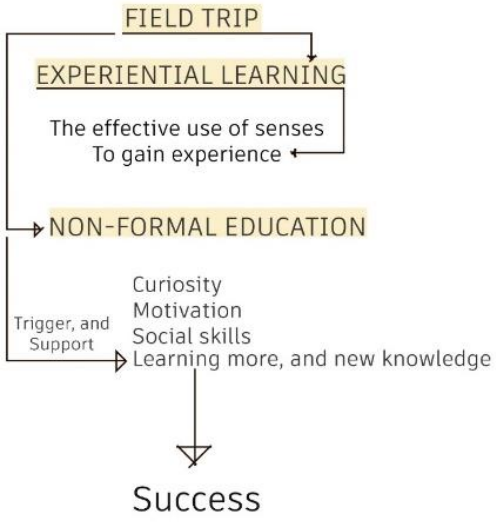


Figure 3.34. Accomplishments of field trips, adapted from Çağlar (2019).

Figure 3.34 presents the effects of field trips on students' success. Field trips facilitate experiential and non-formal learning environments that allow students to use their senses efficiently, learn more, and gain new knowledge (Çağlar, 2019). In addition, Çağlar (2019) explains that successfully organized field trips support the affective and cognitive learning of students permanently.

The Sakıp Sabancı Museum was a house before it began functioning as a museum and it has a historical atmosphere both indoors and outdoors. People can experience historical visuals and smells, allowing them to learn history through spatial

characteristics such as the texture of a wall or the smell of antique wooden chairs. Theaters are other examples of the presentation of old "textures" to connect old experiences to our modern lives through spatial and cultural characteristics. Actors wear clothes in line with the context of the play to convey the "texture" of the play to audiences. These two examples support people in experiencing the context of learning environments. From the perspective of museums, the spatial characteristics of a place should be appropriate for the human components of the visitors, the context of the art objects, and the architectural styles of the indoor and outdoor settings. The spatial characteristics should also support the conditions of art activities such as exhibitions and art studios. For instance, there should be proper lighting for the exhibited objects to allow people to have proper sensory experiences. In terms of architectural style, the approaches to protection and exhibition should support the design attributes of the architectural style. For example, the Louvre Museum has a special architectural style both indoors and outdoors. It provides a learning environment for art through its spatial characteristics based on the support of the conditions of objects, activities, and architectural styles. Hence, there should be consideration of the effects of spatial characteristics on the human components as well as support for objects, activities, and architectural styles in order to contribute to the learning of people in museum environments.

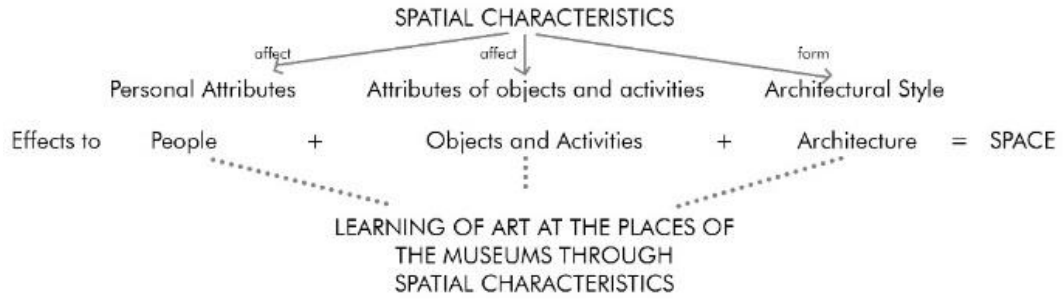


Figure 3.35. Relationships between spatial characteristics and personal attributes, objects, activities, and architectural style.

As Ertürk and Özbek (2017) note, a place gains meaning with things, in addition to the contributions of people to the place. These things can be tangible or intangible. The sensory attributes of a place are formed within processes and are explained through relationships with bodies, poetry, objects, and society (Ertürk & Özbek, 2017, p. 1). In a similar vein, as Hein (1991) states, there is a need for an active process through senses and the construction of meaning within both physical and mental contexts. San (2020) argues that the learning of art is a synthesis of cognitive and sensory learning.

Van Wengen (1979) explains that cognitive learning is related to the formation of concepts through mental activity while feelings play a role in affective learning, and the difference between them was delineated by Bloom, an American education expert. Thus, cognitive, sensory, and affective learning are all important for learning at museums.

To summarize, museums offer formal, non-formal, and informal learning environments for art. They have a role of complementing the learning process, which starts at school (Rennie & McClafferty, 1995, p. 15). There is potential for contributions to learning from both the indoor and outdoor settings of museums. Aydemir (2010) states that museums provide education throughout life and she stresses that the focus of museums has shifted to become people. Thus, it is important to support the functions of museums to ensure that they keep their educational roles for all people. Ünal and Pınar (2017) state that experiences at museums should be a part of children's education, not merely a simple trip. There should be opportunities for cognitive, affective, sensory, and social learning at museums to support their insight and knowledge.

Yıldırım (2015) emphasizes that the learning of art that takes place at school and in home environments should be supported with experiences and one-on-one learning to make further contributions to children's knowledge of art and culture, and museums have significant roles in doing that. Riedler (2016) states that the essence

of art is related to its ability to affect people through colors, shapes, textures, and lines.

Riedler (2016) further asserts that the compulsory audiences of instructors at museums do not provide active learning environments as there is no involvement of the listeners in the learning process. Active learning requires the effective use of the senses. Dewey emphasized the significance of museums as learning environments (Ünal & Pınar, 2017). He also highlighted the concept of experience. According to him, proper mental comprehension entails the perception of relations between experience and its outcomes, and it is important for connecting prior experiences (Riedler, 2016). For example, after visiting an exhibition involving the use of senses and the emergence of emotions and ideas, children can achieve learning outcomes in activities where there are opportunities to use their senses in accordance with their experiences at the exhibition. Thus, there are tangible and intangible ways of learning knowledge at museums. While the use of senses on physical structures is a tangible way, the emergence of emotions and ideas is intangible. The active formation of learning and knowledge is the particular focus of the constructivist approach at museums. Moreover, there should be consideration of the attributes of learners. Children are the participations of the case study, and in order to evaluate their relations with place, it is necessary to understand their attributes such as developmental stages and place perception. For example, Kuruoğlu Maccario (2002) states that there should be enjoyable, attractive, artwork-based activities for children.

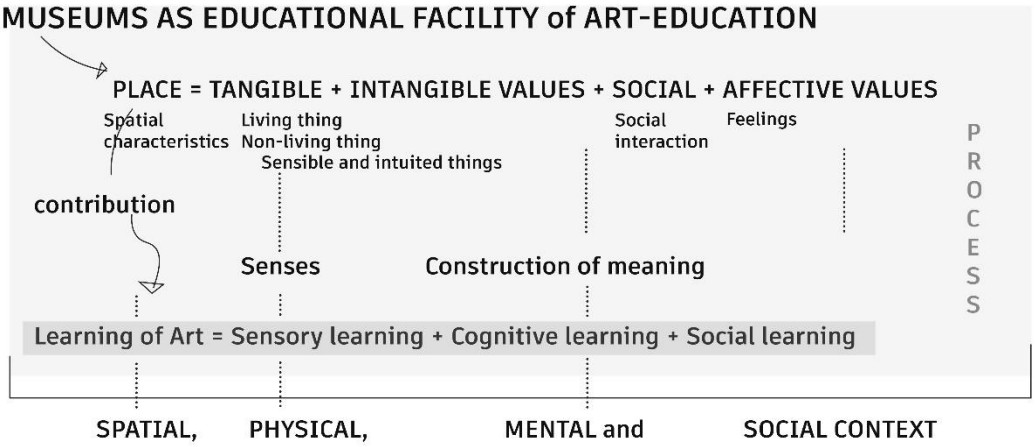


Figure 3.36. Museums as facilities of art education, adapted for the topic of this study from Van Wengen (1979), Hein (1991), Rennie and McClafferty (1995), Ertürk and Özberk (2017), and San (2020).

Figure 3.36 presents the framework of this study's main points to be taken into consideration and the relations between them. Museums' contributions to learning, which is informal learning due to the fact that it takes place outside of school as the location for formal learning, is the main focus of this thesis. This figure illustrates different ways of learning about art in museum settings. Accordingly, there are tangible and intangible values in museum settings. The senses collaborate with tangible values and provide sensory learning. For instance, painting a wall outdoors ensures a learning environment by triggering the senses and allowing people to participate in the process of the production of art. Intangible values consist of sensory things and the formation of meaning by mental processes. People associate different meanings with art products in terms of their personal backgrounds, which include different components such as emotions and interests. In addition, a place presents opportunities for learning by facilitating social relationships between people. For example, there are children's art studios at CerModern where they can perform different artistic activities in groups. This results in social learning for the children. Children have diverse backgrounds due to human components such as gender and age. Jean Piaget defined the different developmental stages of children, and Van

Wengen (1979) explains that this is important in providing activities for them from cognitive and affective perspectives due to the fact that children have the ability to form relationships with abstract concepts at certain ages. Therefore, museums become learning environments for art through sensory, cognitive, affective, and social learning.

The use of the senses is essential in meeting the demand for learning. Mutal (1979) states that the obstacles facing children in their use of their senses create further obstacles for their learning via out-of-school education and are even harmful for characteristics such as curiosity and independence. She also describes the adverse effects on the process of two-way communication between children and thus on their childhoods in general. Van Wengen (1979) argues that children have a desire to identify whatever is being exhibited. They are curious and inquiring learners. Objects are sources for receiving knowledge while the use of senses is a method in order to do that. Akyalçın (2019) states that the objects at museums are tangible, and so the learning at museums is different from learning based on intangible ideas from books. She also notes that visitors infer meanings from their experiences at museums. Williams (1982) states that museums have two main characteristics, which are bringing objects and people together and offering free education. He points out the importance of objects in learning as museums elicit individual experiences with art objects, and he suggests four areas of mental-emotional operations within which visitors undertake implementations on art objects, which are looking, reacting, thinking about art in a cultural context, and making judgments. These can be seen as the potential outcomes of learning about art in four stages in a cognitive way as in the Figure 3.36.

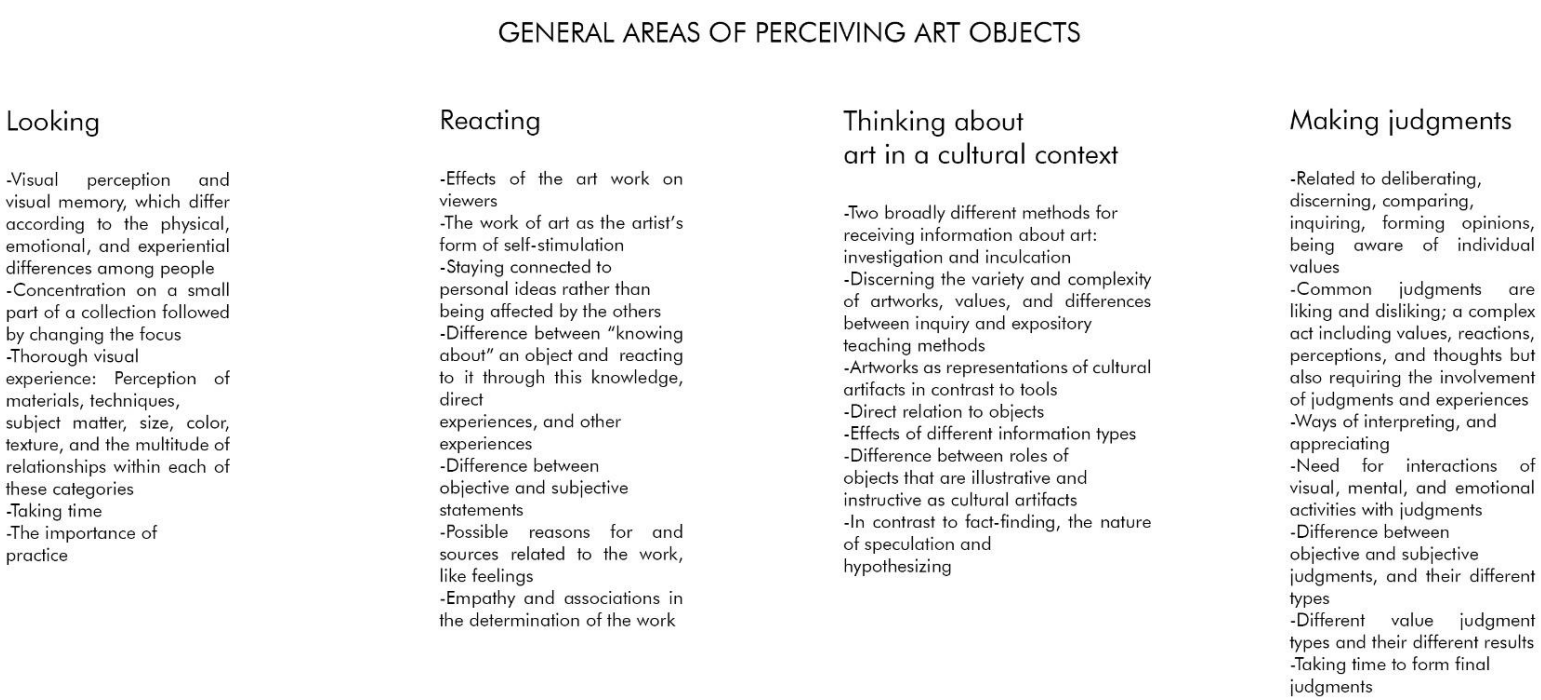


Figure 3.37. General areas of perceiving art objects, adapted from Williams (1982).

Yıldırım (2015) states that art triggers the creativity of children, and creative art education provides learning in the most effective way. She argues that the development of the creativity of children includes education addressing their senses, capacity, and abilities of perception and thus, in turn, their acuteness, interiorizing, questioning, comparing, and integration. She notes that education has impacts on creativity. Moreover, creativity needs experience, and so it is important to provide activities such as music, dance, and aesthetic experiences in terms of art (Yıldırım, 2015). Akyalçın (2019) states that museums trigger the sense of creative thinking and the power of imagination, and so they play significant roles in supporting creativity and the learning of art. She explains that the relationships of students with art objects provide the enhancement of their knowledge and creativity. Thus, it is important to provide opportunities for interactions with art objects through the effective use of the senses in order to support children's creativity and help them learn about art.

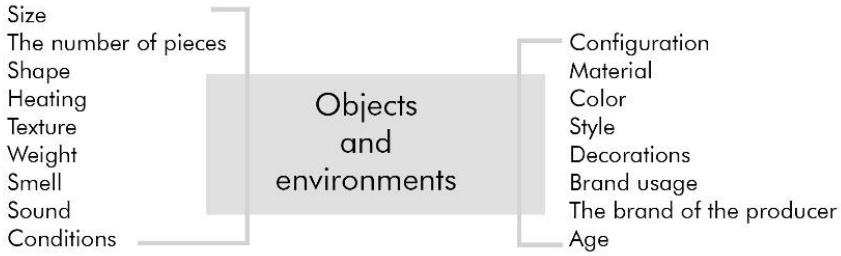


Figure 3.38. Objects and environments, adapted from Hooper-Greenhill (1999).

Hooper-Greenhill (1999) states that the senses of touch, sight, hearing, smelling, and, to a lesser extent, taste are important in the pre-examination of objects and environments. Accordingly, Figure 3.38 illustrates the importance of the use of the senses to perceive and learn about objects and their attributes. The same is true for place perception. A place can be art through its own design. Uluçay Özsavaş (2017) asserts that places are objects of art in terms of the place of art, while designs of places are the focus of the art of place. Van Wengen (1979) emphasizes that

children's desire to experience the environment is reflected in the context of exhibitions at museums. Thus, there should be consideration of the spatial characteristics to provide such experiences. Van Wengen (1979) gives the example of a room full of furniture from the period to which an exhibition belongs.

Figure 3.39. İstanbul Toy Museum (Anonymous, n.d.). Retrieved from: https://seyyahiz.biz/hayal-dunyasina-yolculuk-goztepe-oyuncak-muzesi/

Figure 3.39 provides an example of a room designed in accordance with its theme, which is space in this case. The museum in which this room is located is the M. Rahmi Koç Toy Museum and this particular place exhibits toys related to space. According to the Association of Children's Museums, play, exploration, and interactive learning are components of children's museums. Children's museums generally have innovative indoor and outdoor designs, with corridors that have different widths and lengths, tunnels, pools in the museum gardens, and terraces for planting activities (Karadeniz, 2013). It is of considerable importance that both indoor and outdoor areas of a museum should have appropriate spatial characteristics to affect the attributes of children ranging from their needs to their triggers to ensure the effective use of their senses and, in turn, their learning. Similarly, Dilli (2017) argues that the design of museums should provide opportunities for permanent learning, in which the effective use of the senses is important, as well as learning through experience. Senses play an important role in experiences. Haase (1979) notes that children experience things not only visually but also through the outcomes

of touching, smelling, tasting, and hearing. These are all key components for active participation. These components work together with play, exploration, and socializing to encourage children to participate in activities, have experiences, and learn. This thesis discusses the development of understandings of art and culture in the settings of CerModern, where children gain contributions to their mental, social, physical, and affective ways of learning about art and culture. Therefore, it is important to consider the factors and impacts of active participation for learning.

Figure 3.40. Cin Ali Museum (Anonymous, n.d.). Retrieved from: https://www.ankaramasasi.com/haber/713411/mimar-ve-cin-ali-muzesi-kurucusu-nevin-kaygusuz-apaydin-ile-ozel-roportaj

Figure 3.40 shows an example of an opportunity to provide a place for children to play in a museum setting. The design of this place encourages children to use their imagination in a broader sense and gain a better understanding of the story behind the context by using their senses effectively. Thus, they experience the place and, in turn, have learning outcomes. Van Wengen (1979) states that empathy provides active participation at museums, such as using mechanical devices and completing assignments within the scope of the museum. He mentions that participation in the exhibitions supports empathy in contrast to simply looking at them. For this reason, there should be consideration of museums focusing on people rather than the exhibited objects.

Play is an important tool for expression and learning for children, and this supports the emergence of creativity (Yıldırım, 2015). Mutal (1979) states that games directing attention to an object and allowing observations affect children's focus and, in turn, help them understand the message at museums. The reason for this is that play is an important tool for learning and fun. Therefore, activities that have positive effects on inquiring, curious, and fun-loving children are important in affecting their development from different perspectives such as creativity, which this study focuses on. Munari (1979) describes the transmission of knowledge to children through play in ways including rules and techniques such as stroke, texture, and collage. For an example, he offers the reproduction of artworks as a reference to the museum in processes of learning rules and techniques. Similarly, Hodge (1979) states that a relationship with the museum collection is significant for the learning of children. Thus, children find opportunities to express themselves, enhance their creativity, and gain contributions to their learning of art. Mutal (1979) mentions that the children's own works are objects reflecting their freedom of expression. Moreover, Munari (1979) states that an ideal experimental laboratory where the learning of these rules and techniques takes place has workbenches with vertical chipboard panels from which children can reach visual information about the display, which is important for activities from the perspective of spatial characteristics' harmony with the activity. Dilli (2017) listed places that are appropriate for activities. Giraudy (1979) similarly states that activity workshops that are specifically focused on themes such as color and music work interactively with the two galleries with glass panels at the children's workshop at the Georges Pompidou National Centre for Art and Culture. These activities provide opportunities for children to use their senses effectively. Giraudy (1979) also notes that this art school improves the creativity, imagination, and sensitivity of children and, in turn, their development by making them use all of their senses with the emergence of their emotions and inventions. Within the scope of this study, there should be opportunities to play and creative activities related to art, and children should have opportunities for effectively using their senses in the learning of art at museums. Akdoğan, Durmaz, Kimzan, and Acer (2019) state that

the flexibility of materials in terms of their use, color, and pattern promotes the creativity of the children in museum art studios. They also mention the role of the lighting, air conditioning, and heating of art studios in museums. Thus, museums play an important role for creativity (Ünal & Pınar, 2017). Yıldırım (2015) explains that creativity in art depends on visual and imagination-based perceptions. The learning of art requires both cognitive and sensory ways of learning. Museums provide different learning environments for children by improving their skills in areas such as observation, creativity, and imagination. Similarly, Ünal and Pınar (2017) state that the opportunities for children's deep-thinking, commenting, and internalizing of objects and events are important for children's active participation. This makes them learn effectively. Thus, stimulations, the effective use of senses, socializing, exploration, and playing are important factors for active participation and, in turn, the learning of art by children. Moreover, their relationships with creativity and art make contributions to children's learning of art. Hence, the objects and their accessibility are important for an effective experience that will facilitate learning.

Van Wengen (1979) discusses the presentation at museums. The style of presentation is important for conveying the message to the audience. Haare (1979) describes the presentation of information by means of discussion, educational games, films, and slides. The presentation should also be appropriate for the context of the story. The physical attributes of the scene and objects should follow the context. In other words, the place where the activity occurs should support the context of the activity. Van Wengen (1979) gives examples of role-playing games, museum assignments, workshops, and discussions to support learning at museums. It is important to provide these learning activities in line with the spatial characteristics of museum settings. The spatial characteristics should stimulate the senses and their effective use in playing, socializing, exploring, expressing, and developing creativity through objects and activities should be ensured in museums to make contributions to children's learning of art. Museums, as learning environments of art by means of the art objects they contain and their designs, consisting of architectural styles and

spatial characteristics, have positive effects on children. For all these reasons, children have meaningful interactions with these places and receive the effects of these interactions.

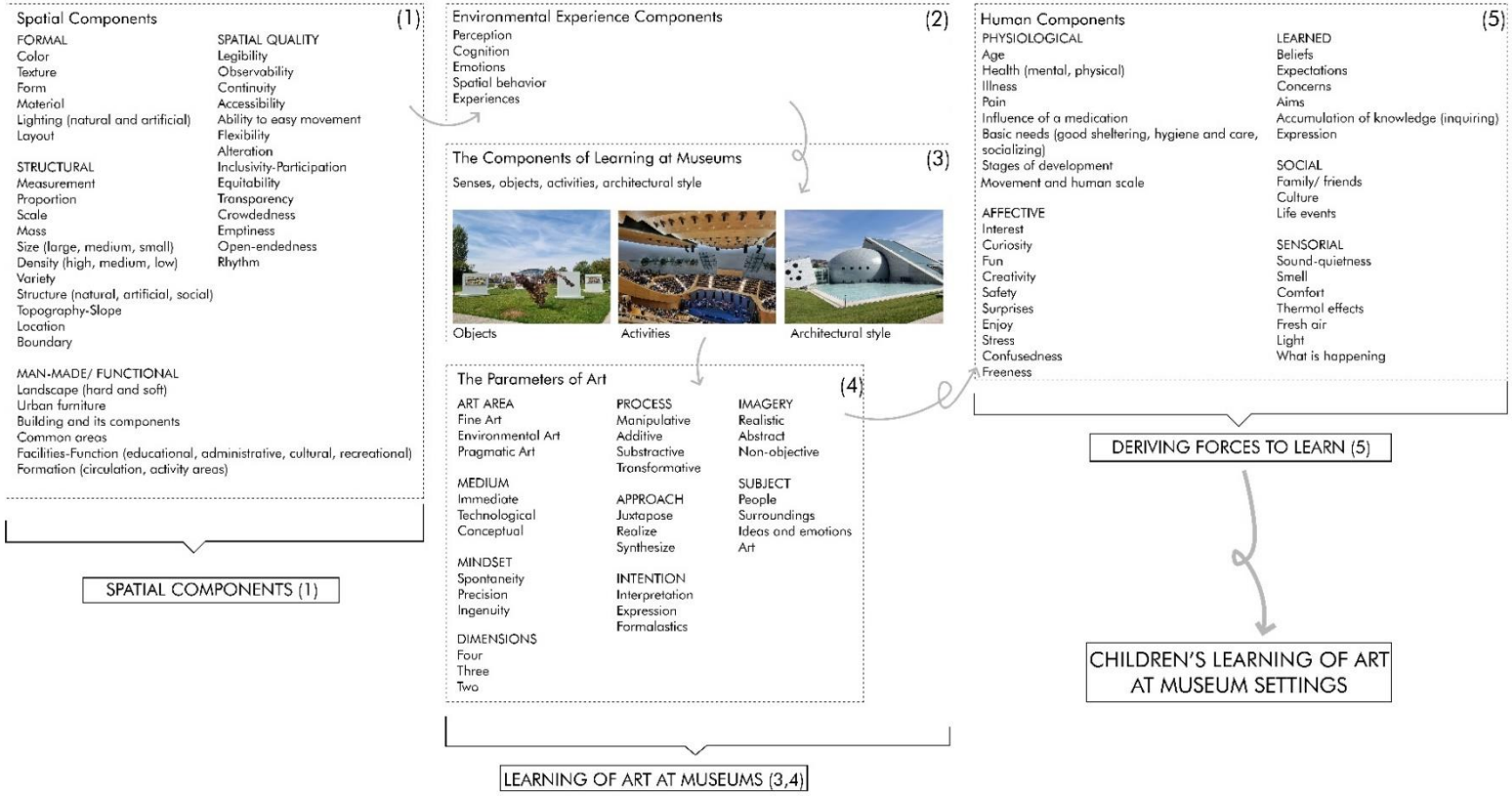


Figure 3.41. Components of children's learning of art at museums.

Figure 3.41 shows how spatial characteristics have impacts on objects, activities, and architectural styles. These characteristics are sensed by people in accordance with their own human components. Children, the focus of this study, perceive their surrounding environments by using their senses. The use of senses is important for learning effectively at museums; in fact, it is a compulsory method for learning through place at museums. The places in museums include objects, activities, and their own architectural styles. Activities are another aspect that help children form relationships with places. She mentions that children notice the accessibility of green spaces and animated spaces for their use. Thus, green spaces and areas where there is a diversity of activities are important for children. In a similar vein, Marossy and Olariu (1979) argue that children between the ages of three and six years are particularly receptive to new things, and the plants and animals around them are important for them. They furthermore note that children can gain knowledge about nature at earlier ages. Therefore, there should be consideration of the objects, and especially the natural ones, that capture the attention of children within the scope of the design of spatial characteristics and their effects on the effective learning of children who often use all their senses to learn.

Spatial characteristics have impacts on the opportunities for both objects and activities. For instance, art objects should be accessible to allow people to have experiences with them and, in turn, opportunities for activities based on those experiences. Giraudy (1979) describes the spatial characteristics of a children's workshop at the Georges Pompidou National Centre for Art and Culture in Paris. She mentions that children contributed their ideas in the design process, and there are floors that are transformed from gray to green lawns to provide opportunities for children to sit and lie down, screens of transparent fiberglass for the separation of different activities, natural and artificial plants, a musical hopscotch board, a painting wall, streaming water, lighting, a room for resting, and showers. As she states, there are different workshops based on specific concepts for learning about art, such as color and music workshops. These workshops are important for providing places full of opportunities to use one's senses in free and creative ways. For instance, Giraudy

(1979) states that there is exploration of the daily environment consisting of some elements such as the city, nature, and the interpretation of them as three-dimensional constructions using imagination, cardboards, and papers. Nourjian (2006) explains that common areas provide opportunities for communication, allowing people from different backgrounds to share their interests, and flowing spaces are important for learning. Thus, spatial characteristics are important for allowing such important activities to take place and providing opportunities to use the senses, have permanent experiences, and, in turn, achieve effective learning.

Activities, objects, and architectural styles are formed through spatial characteristics ranging from lighting to scale. For example, children can perceive objects at appropriate levels for their heights and under proper conditions of lighting. If there is an open-air exhibition, the proper sun lighting and shading conditions for comfort should be considered as important points in providing opportunities through spatial characteristics to make people sense the place and its formed components, which are objects and activities, or the components of learning art in museums. This will contribute to their learning of art. The compatibility of the spatial characteristics and the human components of the visitors make the relationships between the people and the place stronger, allowing people to receive the effects of these characteristics.

For instance, in the building of the CSO, there are opportunities to use senses including sight, smell, touch, taste, and hearing through its spatial characteristics and thus, in turn, to be a part of the place. This allows people to gain beneficial effects from the relationship that they form through the use of their senses and the sensory components of the spatial characteristics of the place. Thus, opportunities provided by these characteristics to use the senses effectively should be considered in evaluating these characteristics' effects on contributions to the learning of art.

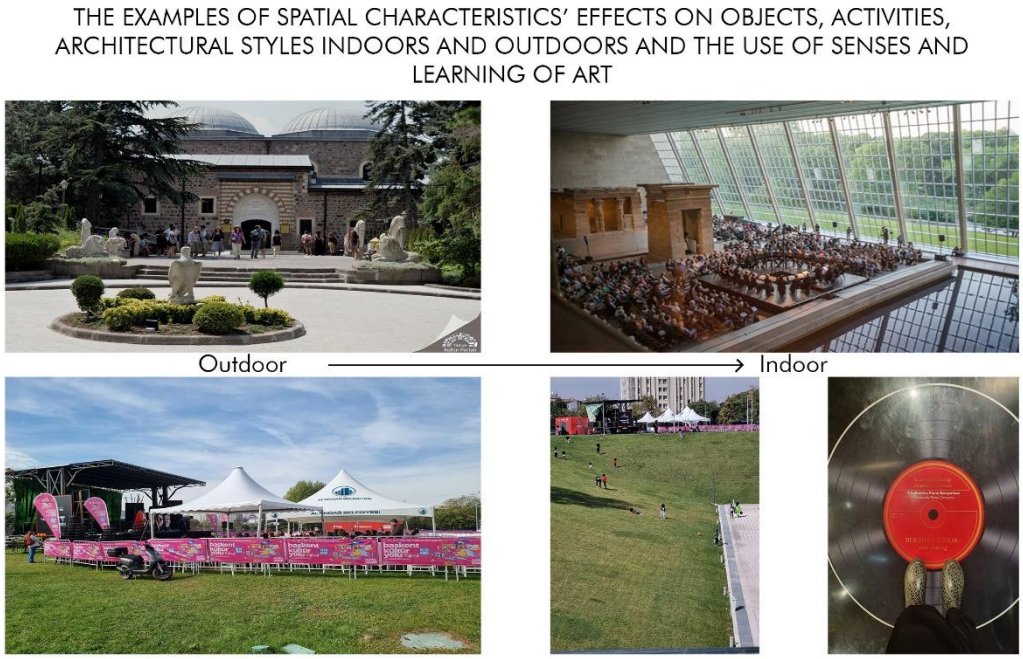


Figure 3.42. Examples of spatial characteristics' effects on objects, activities, and architectural styles indoors and outdoors and the use of senses and learning of art. The photographs in the top row were retrieved from the Anatolian Civilizations Museum at https://www.kulturportali.gov.tr/turkiye/ankara/gezilecekyer/anadolu-medenyetler-muzes and the Metropolitan Museum of Art at https://www.huffpost.com/entry/music-in-museums-concert_b_12576042, respectively. Photographs in the bottom row were taken by the author at the indoor and outdoor settings of CSO.

Figure 3.42 shows how people can learn music from earlier years by using their senses when the spatial characteristics of a place provide such an opportunity. This is an interesting way to affect people's curiosity about art. Spatial characteristics have impacts on the ability to provide opportunities to learn art with objects, activities, architectural styles, and human components. In addition, the opportunities at museums should be accessible for children. Mutal (1979) addressed such accessibility in terms of children living in other places. Thus, there should be consideration of providing museums facilities for all children.

CHAPTER 4

SITE ANALYSIS

This chapter presents the site analysis, thus providing prior knowledge about the site that will be necessary in the explanation of the case study. So, it explains the details of the case study in light of the analysis of the study site, the physical and administrative particularities of the site, and an evaluation of the site in terms of it being a learning environment for the arts. The physical and administrative particularities of the site are addressed in this chapter. Furthermore, as this thesis evaluates art museums within the scope of learning environments for art and culture, the selected study site is also addressed as the final main topic of this chapter from the perspective of being a learning environment.

4.1 Site Analysis of the Case Study Area

The case study for this thesis was conducted at CerModern in Ankara. The building was previously devoted to old railway repair shops, or *cer* ateliers, and was subsequently restored (Yunt, 2015), the design process having been undertaken by Uygur Mimarlık (*Cer Modern*, n.d.). The aim of the establishment of this museum was to provide a strong connection between art and people living in Ankara and, in turn, to educate society (Yunt, 2015). Adıgüzel Özbek & Ertürk (2017) highlight Anthony Giddens' statements about the mutual formation of society and place. Thus, it is significant to consider the physical particularities of CerModern to identify the contributions of its different areas to children's understanding of art and culture for a discussion of its effects on the children who visit. The learning of art is the focus of this study and so it is necessary to evaluate the study site in terms of learning environments to reveal its contributions to the learning of art.

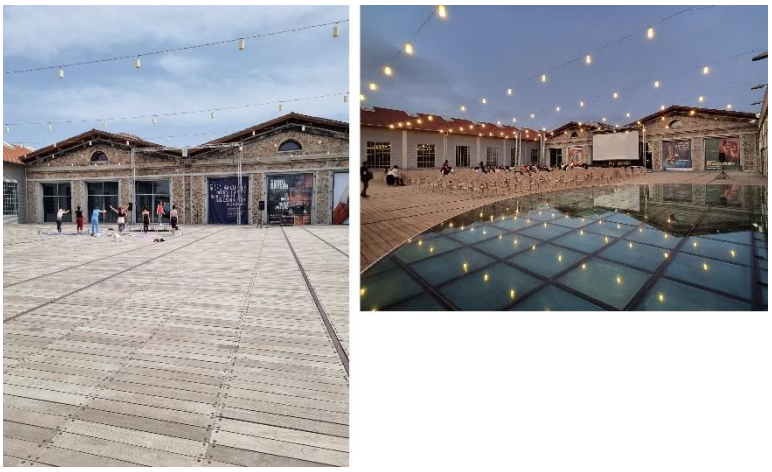


Figure 4.1. Sports activity and outdoor movie screening at CerModern.

People have opportunities to participate in diverse activities thanks to the spatial characteristics and administrative particularities of CerModern. For example, the restaurant, serving a commercial function, is located in the courtyard. Moreover, this space hosts diverse activities such as concerts and open-air cinema. It is obvious that the open space of CerModern functions as a public space by providing diverse activities for people

4.1.1 Physical Particularities

There are significant buildings around CerModern. The CSO building, Ankara Justice Palace, and high-speed train station are some examples.

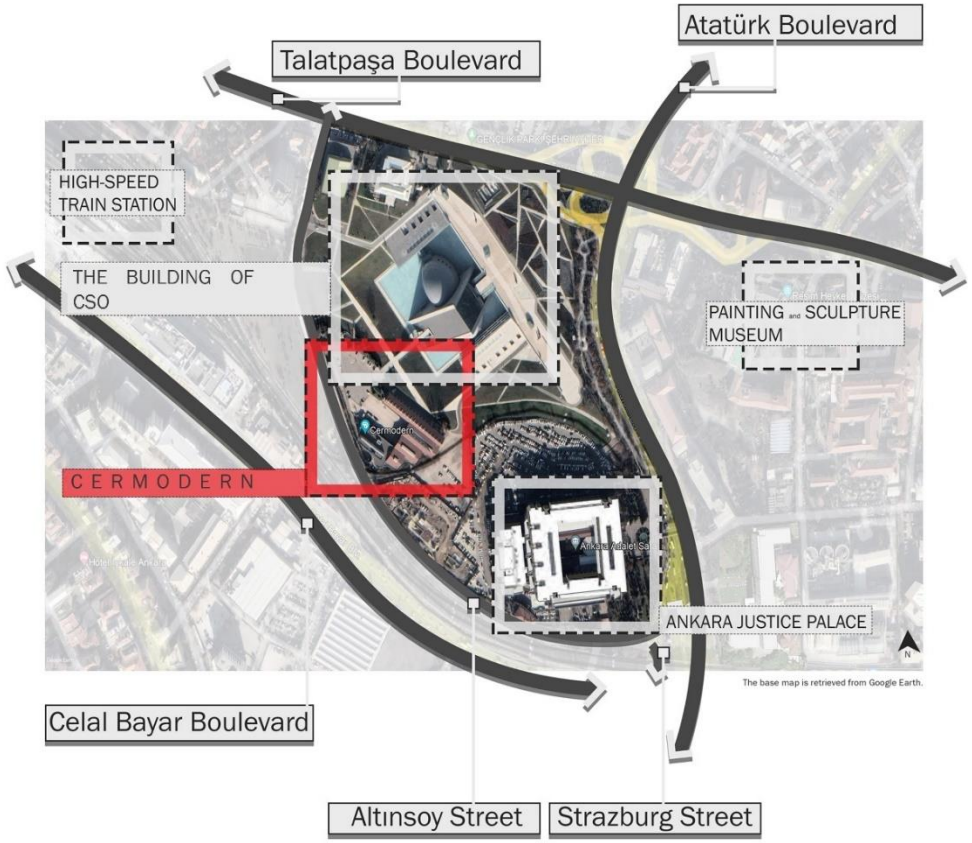


Figure 4.2. Location of CerModern (map data retrieved from Google Earth (n.d.)).

There are other important cultural and administrative facilities of the city within the scope of the location of CerModern. First, the building of the CSO is very close to CerModern. There is a pedestrian connection between them, which means that these two important cultural areas are accessible and connected to each other. Accordingly, there are more opportunities for them to contribute to people's cultural backgrounds. Second, the Ankara Justice Palace and the city's high-speed train station are also located nearby. Thus, CerModern is positioned at the intersection of important functions and roads. This makes this place an important cultural center and one of the focal points of Ankara in terms of its cultural functions. CerModern reflects many

values related to city planning and urban design, ranging from green areas to legibility.

Figure 4.3. CerModern and its connection to the restaurant, parking lot, and the building of CSO (map data retrieved from Google Earth (n.d.)).

The open space is defined with mass, the building, a parking lot, and other open spaces, which are green areas and landscape elements. This is a courtyard (Akbank Sanat, 2018). Çolpan Erkan (1996) indicates that courtyards can be evaluated as outdoor urban spaces. Pedestrian roads connect it to the building of the CSO. This road is significant in terms of providing a connection between important cultural centers of the city. The location of CerModern previously hosted an old railway factory and there is a sculpture reflecting this aspect of the place's history, representing part of an old train. There are three sculptures located near the parking lot. There is also the open space of the restaurant at CerModern.

Figure 4.3 also provides a view from the parking lot to the courtyard of CerModern. The building is not a high-rise building. The human scale is one of the variables affecting the perception of a place and the height of a building has impacts on its relationships with people and the environment. Thus, the height of this particular building also has impacts on relationships with people and the environment. The courtyard of CerModern is an open space that elicits a coherence between the human scale and the building.

In addition, surprising and interesting things for children can be located in squares, such as sculptures, pools, and trees (Ataöv & Peker, 2020, p. 25). The courtyard of CerModern exemplifies such attractions.

Figure 4.4. The sculptures at CerModern. These are points of attraction in the open space of CerModern.

The density of green space is also significant in evaluating the qualities of a place. Halsband (2005) states that campuses consist of private and public settings. Thus,

the existence of green spaces located around a building has the potential to facilitate the individual use or group use of the spaces. This depends on the area, the activities taking place and the people taking part, and whether a group is present or not. When there are more people participating in an activity, an informal learning environment is created by virtue of social relations. The boundaries of the area define it as a public or private area in terms of the welcoming effect in using the place (Halsband, 2005, p. 5). The issue of city gates is another important topic of landscaping.

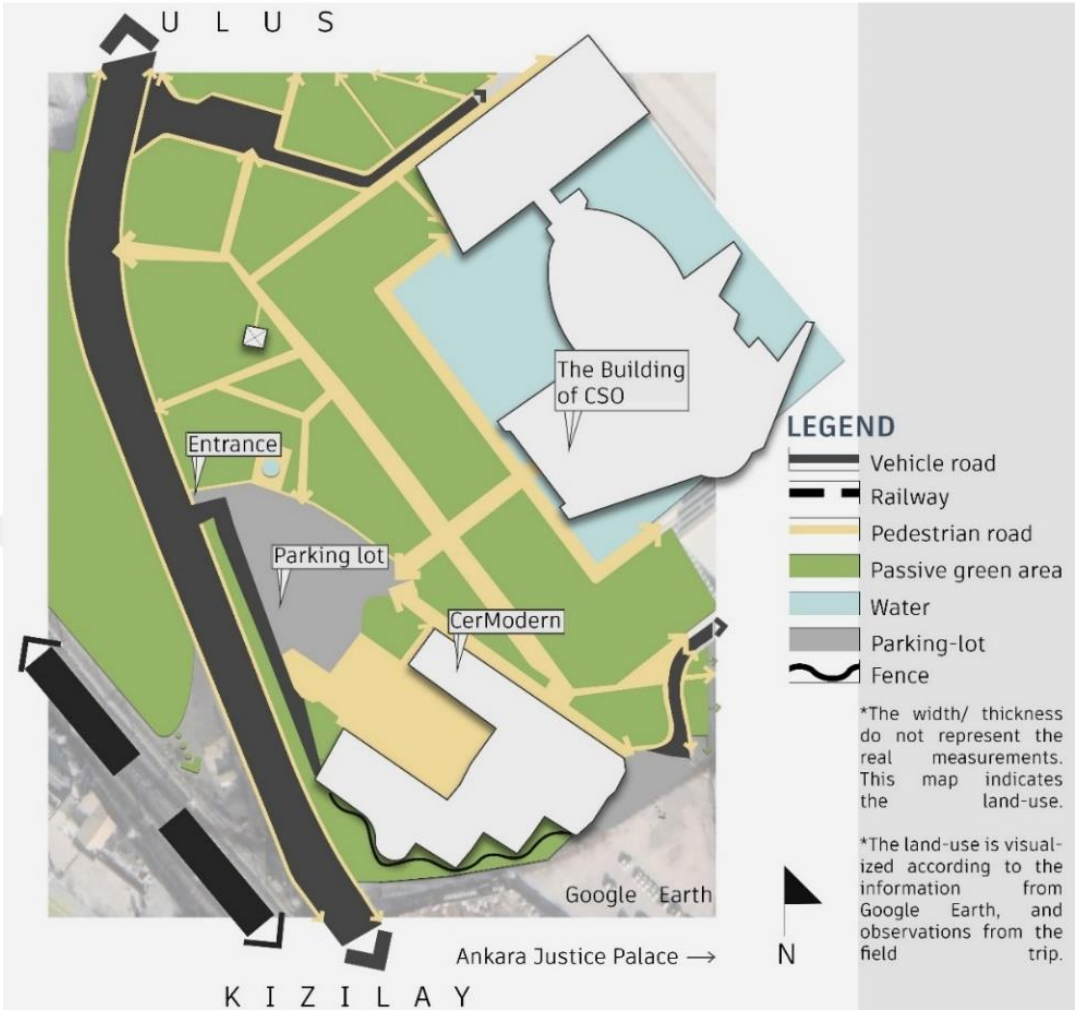


Figure 4.5. Land use of CerModern and its surrounding (map data retrieved from Google Earth (n.d.) and site observations).

It is clear that there are many passive green areas and connected pedestrian roads surrounding CerModern.

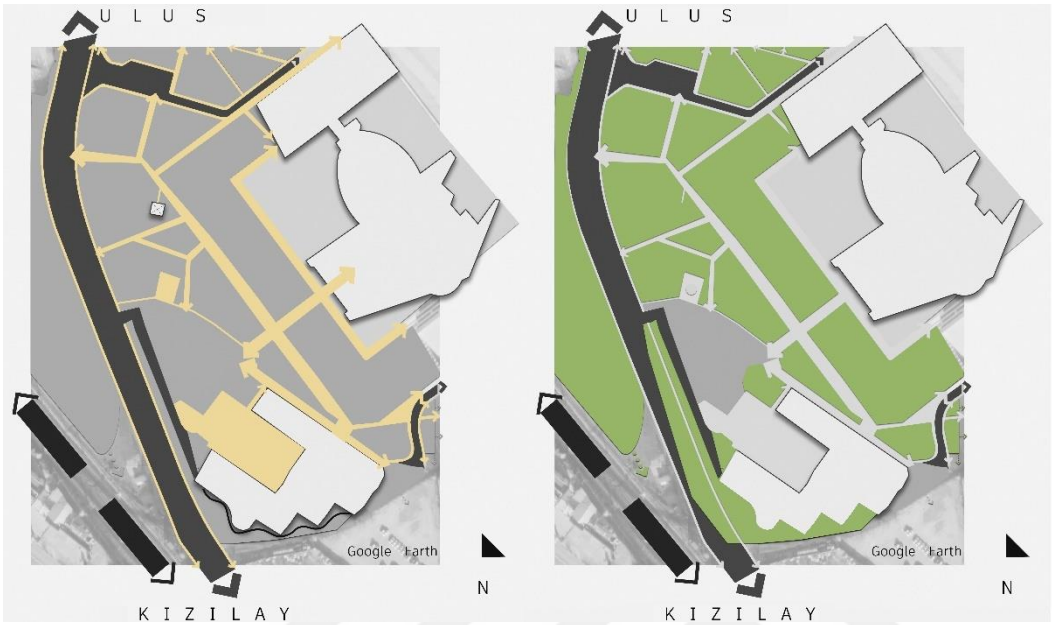


Figure 4.6. Pedestrian circulation and green areas of CerModern and its surroundings.

Figure 4.6 shows the pedestrian circulation and green areas of CerModern and its surroundings. There are many passive green areas around CerModern. There is a continuity of the green areas to some extent. However, this continuity needs to be extended to the inner parts of the courtyard rather than interrupted by a hard landscape element. There is also potential for their active use, although they are currently passive green areas. For example, students have the opportunity to study individually or with groups in the different green areas of campuses (Peker & Ataöv, 2019, p. 13), and something similar could occur around CerModern.

Figure 4.7. Passive green areas of CerModern.

There are passive green areas at the boundaries of CerModern, located between CerModern and the building of the CSO. Therefore, the boundaries and entrances of CerModern have definitions through green areas and pedestrian and vehicle roads.

Furthermore, there are different attributes of green areas affecting learning processes. Peker and Ataöv (2019) state that flowers offer pleasant views, grass can be used as a comfortable sitting place, and sculptures provide shade, which all affect learning positively. Thus, plants as natural objects and man-made objects as landscape components should be considered in designing learning environments.

Halsband (2005) also highlights the importance of landscapes. Maps, signs, and artwork attract people's attention while night lighting and benches offer a safe environment (Halsband, 2005, p. 5).

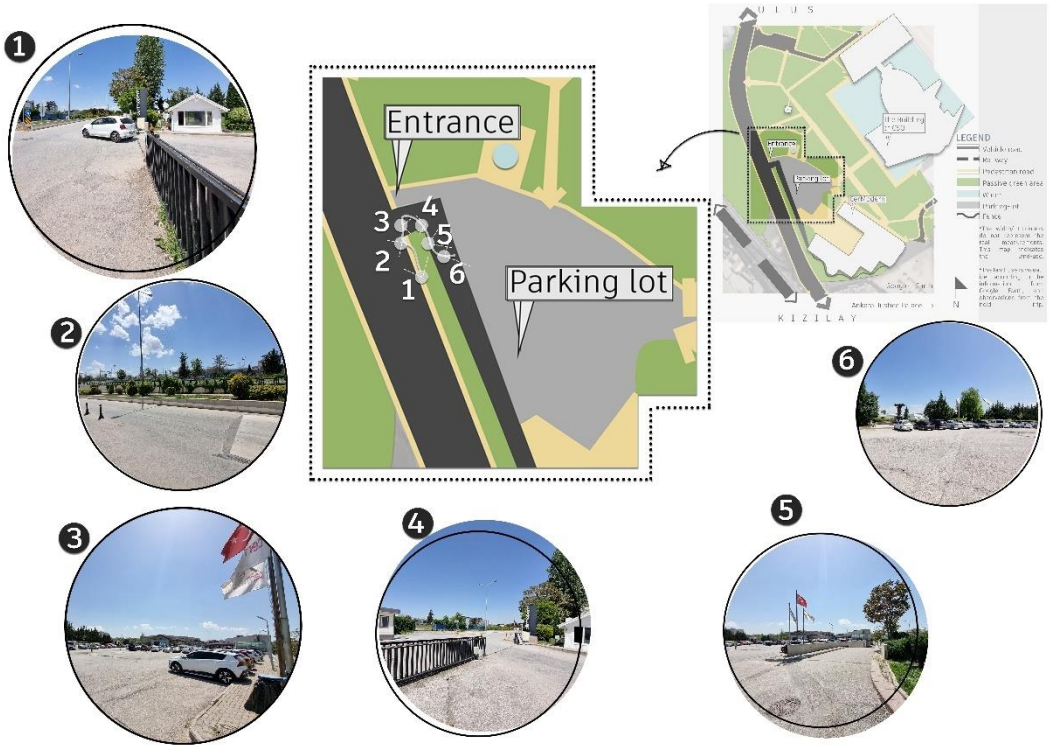


Figure 4.8. Boundary and entrance of CerModern.

Figure 4.8 presents a route around the entrance to CerModern.

All in all, museums are significant urban spaces contributing to people's understandings of art and culture through their indoor and outdoor settings. Taking into account all of these factors, museums are important cultural centers consisting of urban semi-built-up and open spaces with the potential to contribute to children's learning of art and culture, as exemplified by the settings of CerModern.

4.1.2 Administrative Particularities

There are various activities held within the indoor and outdoor settings of CerModern, such as sports activities, movie screenings, plays, and special events for children. Furthermore, there are shops and restaurants.

Figure 4.9. Activities for children at CerModern (retrieved from Instagram, 2022).

Figure 4.9 shows examples of activities for children. There is integration between these activities and the settings at CerModern. For instance, children have opportunities to visit galleries, examine art products, and learn about the themes of the galleries at CerModern. They can subsequently take part in artistic activities related to their visit where they can use human components such as senses and accumulated knowledge. Thus, there is integration between the settings and activities, which contributes to children's learning of art by allowing them to experience diverse settings and form relationships with the spatial components of CerModern.

Social interaction is one of the components that have impacts on the learning of art. For example, Johanson and Glow (2012) note that Bernhardt, an art educator at the Children's Museum of the National Museum in Copenhagen, described the difficulties of finding locations in large exhibition spaces and making relations with art products from the perspective of children. Shaping dialogues, sharing with

children, and strengthening the relations between children and art products, from among the main ideas of Bernhardt, make museums places of social interaction and the exchange of ideas and participation (Johanson and Glow, 2012, p. 38). Moreover, the involvement of visitors depends on activities and their contexts. Brown and Novak (2007, as cited by Johanson and Glow, 2012) stressed that aesthetic, spiritual, emotional, and social aspects and fascination attract people's attention during live performances. Johanson and Glow (2012) stress that a museum's main goal is the improvement of the experiences of visitors and their perceptions of the museum and its activities. There is a diversity of artistic activities at CerModern, including art markets and modern dance shows outdoors and exhibitions indoors. Thus, it is important to provide different activities that have rich contexts for the arts in arts centers, museums, and their different settings in order to allow people to have connections with the settings and activities provided within these settings. McCarthy et al. (2004, as cited by Johanson and Glow, 2012) stresses that strong involvement supports people's experiences to make them satisfied and support their interests in the arts through their lifetimes, and this results in their lifelong learning of art and culture.

There are many opportunities to make contributions to children's understandings of art and culture both indoors and outdoors. Spatial characteristics play important roles in doing so. For example, there are different ranges of the flexibility of the spatial

characteristics within the settings of CerModern. This flexibility affects the activities and ways of accessibility.

Figure 4.10. Example of an indoor setting of CerModern.

Figure 4.10 provides an example of the flexibility of indoor settings' spatial components. This photograph was taken on a national holiday of Türkiye known as "National Sovereignty and Children's Day" on April 23. On this day, there are many celebrations and special activities across the country. CerModern is one of the major places providing special activities for children. In Figure 4.10, children are drawing posters using colorful pencils, their bodies, columns, and the floor of the setting. Thus, there are opportunities to use their senses, imagination, and the physical particularities of CerModern. The place acts as an activity area rather than a circulation area.

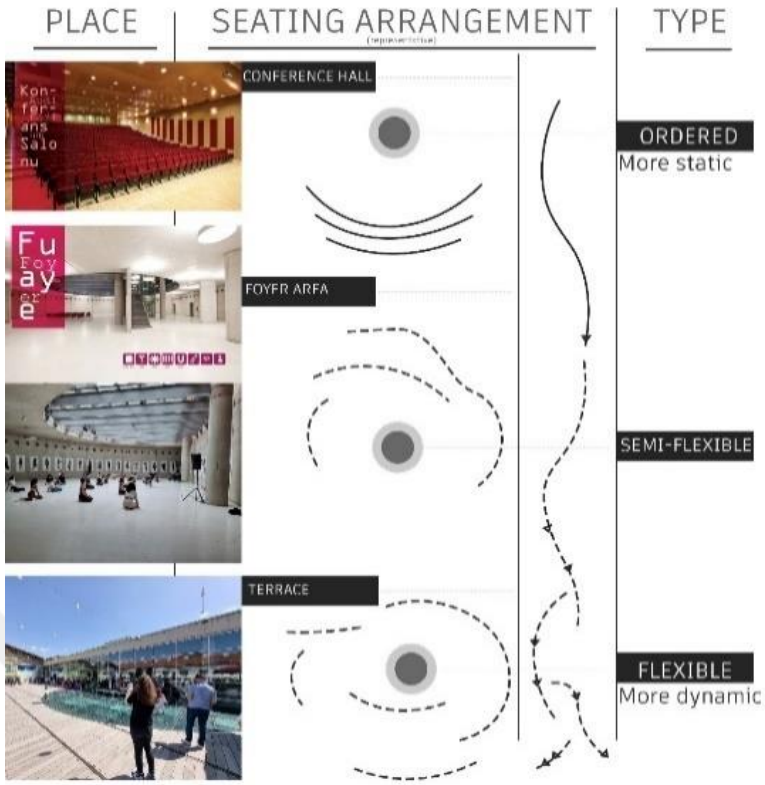


Figure 4.11. Seating arrangements of alternative learning environments at CerModern.

Figure 4.11 provides examples of the seating arrangements in the conference hall, foyer area, and the open space referred to as a terrace on the website of CerModern. The spatial organizations of these places are different from each other and the effects of perceptions of them differ accordingly. People can perceive activities in specific settings easily when they are close to the activity. Thus, they have the opportunity to take part in activities more actively. For instance, while people watch performances at specific points from the conference hall, they can change their positions as they wish within the foyer area and terrace of CerModern. The seating arrangement on the terrace is more flexible than that of the indoor settings as the borders of the outdoor areas are wider than the others in terms of spatial design.

The content of activities, the ability to establish social interactions through these activities, and the design attributes of the settings in which the activities take place

are important for this study. Generally speaking, all of these points are important for public places. The variety of activities and the size of large places encourage people to spend more time in such places and have more interactions with the place, the activities provided at the place, and other people visiting the place. Johanson and Glow (2012) state that museums' functions have shifted from the collection of human-made products to an identity as public spaces for live communications.

CerModern has both open and built-up areas. While the courtyard and the circulation and green areas are open spaces, the exhibition areas, shop, restaurants, and art studios are located within built-up space. Thus, there are indoor and outdoor settings at CerModern. These settings have the potential to host social interactions through different activities. It was observed that outdoor sports facilities and a design market took place in the open spaces of the courtyard. Moreover, children were seen to have opportunities to expand their understandings of art and culture through activities in the art studios. Therefore, both the indoor and outdoor settings of CerModern provide informal learning environments. In addition, it is important to evaluate the social interactions of people in different settings in buildings and on urban scales. Halsband (2005) states that the density and scale of campus buildings affect social interactions negatively. Thus, density and scale are points to be taken into account in terms of design attributes of settings in this study.

4.1.3 Evaluation of the Area as a Learning Environment for Art

Ataöv and Peker (2020) emphasize that the United Nations Convention on the Rights of the Child, which Türkiye signed in 1990, bestows rights upon children such as playing, participating in activities appropriate for their ages, and making good use of time. Thus, it is important to provide educational and enjoyable activities at various places within cities. Museums and other sociocultural facilities of cities should ensure these kinds of activities in order to contribute to children's learning of art within these settings.

Settings and their influences on learning are of considerable importance within the scope of constructivist theory. From the perspective of museum settings, this theory gains further importance due to the potential of these settings from the vantage point of some remarks made by Hein (1991) in accordance with the theory's principles. Learning is an active process that learners take part in with the help of their senses and other personal attributes such as ideas, emotions, and tendencies. Many educators at museums state that involvement through hands-on and real-life activities are important for learning, but these activities are not effective for learning on their own (Hein, 1991). Hein (1991) offers an example of an activity done by children that directs them to finish it through physical processes instead of defining it via personal meanings through mental processes in a museum. According to Hein (1991): "All hands-on activities must also pass the test of being minds-on…" (p. 4). Hein (1991) furthermore points out that such situations affect the relations of the meanings given by the children and their overall experiences at museums. Therefore, it is important for children to participate in the activities provided in museum settings through both physical and mental processes and to create relationships between the experiences in museum settings and activities' outputs, such as personal meanings, as well as the learned knowledge to define the contributions of these settings to learning.

Figure 4.12. Indoor activity at CerModern.

Figure 4.12 provides an example of an activity at CerModern. The activity involves opportunities for children to express themselves in any way they choose. Thus, they give meaning through these activities in the museum's indoor space. Children use their senses and give meaning to their artwork freely. Moreover, the column and floor as spatial components of the indoor space work as surfaces for making art, which allows children to build relationships between themselves and the settings by experiencing and learning about art.

Another important point related to learning is that learning occurs within a social context. People are social living creatures who engage in communication and form societies (Fosnot & Perry, 1996, p. 23). Hein (1991) states that social interaction has impacts on learning. There can be rooms near the galleries where people may learn by both doing and communicating in modern art museums (Hein, 1991, p. 6).

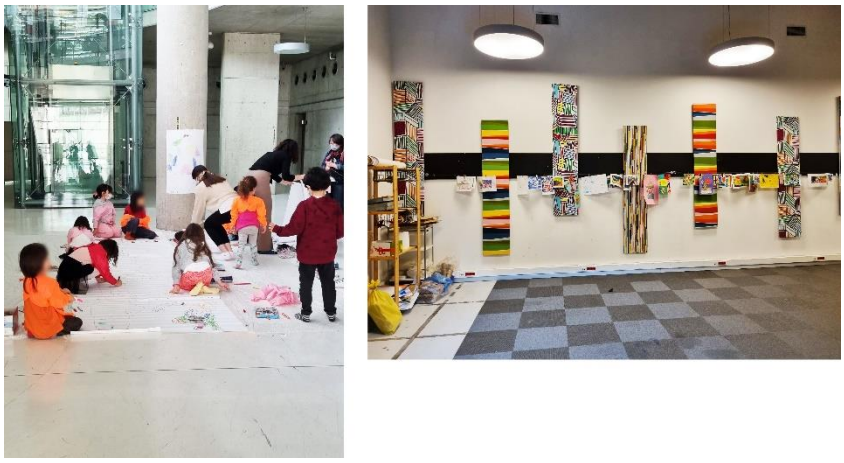


Figure 4.13. CerÇocuk art studio at CerModern and activity in front of the art studio.

The CerÇocuk art studio has a spatial organization that allows children to communicate with each other while creating artworks. Thus, they can express themselves within a free artistic environment. This indoor museum setting is an example of providing social, artistic, and cultural interactions for children. It is important that children "shape" their expressions through art and exhibiting artworks by hanging them on the wall as a spatial component. In this way, they learn and give meaning to artworks through spatial, mental, affective, and social processes in museum settings. Therefore, there is an effective contribution to the children's learning of art.

Furthermore, Hein (1991) emphasizes that there should be various opportunities to prevent difficulties in receiving knowledge from museums by providing diversity in spatial organizations, the use of senses, and activities for the many visitors receiving knowledge. Another important point is that people's learning capacity depends on their previous knowledge, skills, and work they have done. Therefore, learning capacity is one of the contributors of the perceived attributes of the effects of museum settings on children's learning of art and culture and its impacts will differ for different children.

Each child perceives, learns, and arranges knowledge according to his or her own accumulated knowledge and the guidance of educators. This reflects the contributions of the museum settings where activities and interactions take place.

Hein (1991) also emphasizes that visitors should spend more time in the physical settings of museums while mentally processing and arranging knowledge due to the fact that learning requires a generous period of time. Hein (1991) highlights the effects of shops close to museums on the time spent there by visitors.

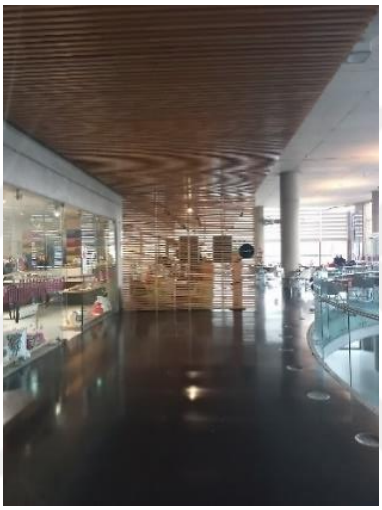


Figure 4.14. Shop selling artworks and the indoor restaurant of CerModern.

Another example of a chance to learn outdoors is the design market. It was observed in the present case study that the design market is an attraction point for people and that there are many opportunities to encourage them to spend more time outdoors at CerModern. These opportunities including selling diverse artworks, buying or looking at them, eating, sitting, talking, playing, and dancing. On the same day of these observations, a jazz concert was held outdoors. Thus, there are many ways to have experiences that allow for the learning of art outdoors through spatial components and activities taking place. The weather was sunny on this day of observation and there were many people of different ages enjoying the diverse activities. It was like an open-air exhibition combined with a festival, as stated in the social media account of CerModern.

Figure 4.15. Design market at CerModern.

In another shop called modulartoys, children can play and design things with the materials provided, thus participating in hands-on activities that allow them to use their senses. This is an attractive place for children due to providing such opportunities.

The assumption of this study is that museums contribute to children's learning of art in spatial, social, sensory, mental, and affective ways. All of the examples given above in relation to the design market show that indoor and outdoor settings provide opportunities for people, including children, to have experiences in different ways that will contribute to their knowledge of art and culture, such as listening to music, sitting, and playing with toys in these settings. Thus, people have chances to socialize and use and improve their skills in environments where art is provided through different activities such as a jazz concert and artworks exhibited in the design market. The exhibitions and other activities related to art both indoors and outdoors make

contributions to the learning of art in spatial, mental, sensory, affective, and social ways at CerModern.

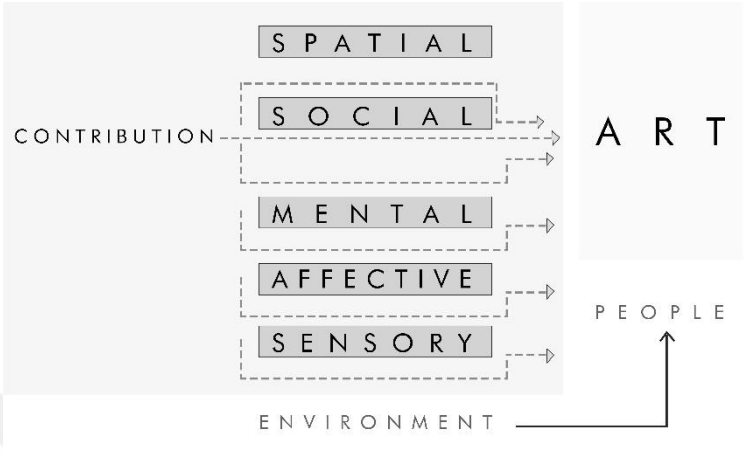


Figure 4.16. Ways of learning at CerModern.

All in all, there are learning environments of art and culture from spatial, social, mental, affective, and sensory aspects at CerModern. This study evaluates learning from the affective aspect.

CHAPTER 5

CASE STUDY AND METHODOLOGY

This chapter presents the methodology of the thesis. First the study variables are explained. The literature review conducted for this study helped in the process of selecting these variables or, in other words, identifying the relevant parameters of children's learning of art in museum settings. Spatial and human components as the components of learning at museums are variables or parameters of interest together with the parameters of art. The attributes of participations and the data collection process are also addressed in this chapter. Photographs of indoor and outdoor areas of the study site and questions posed via a survey were the tools used for data collection, and this chapter provides a wholistic explanation of those tools.

5.1 Study Variables

Yücel Coşar (2017) explains that the physical and psychological effects of a place depend on the design of that place, it ways of use, and perceptions of it. Thus, the design of the place, its ways of use, and perceptions of it play important roles in the evaluation of the effects of the place and its effects on children's learning within the scope of this study.

The variables of this study include children's needs, the driving forces for learning, learning in the context of senses and spatial components, forms of art, and the components of learning at museums.

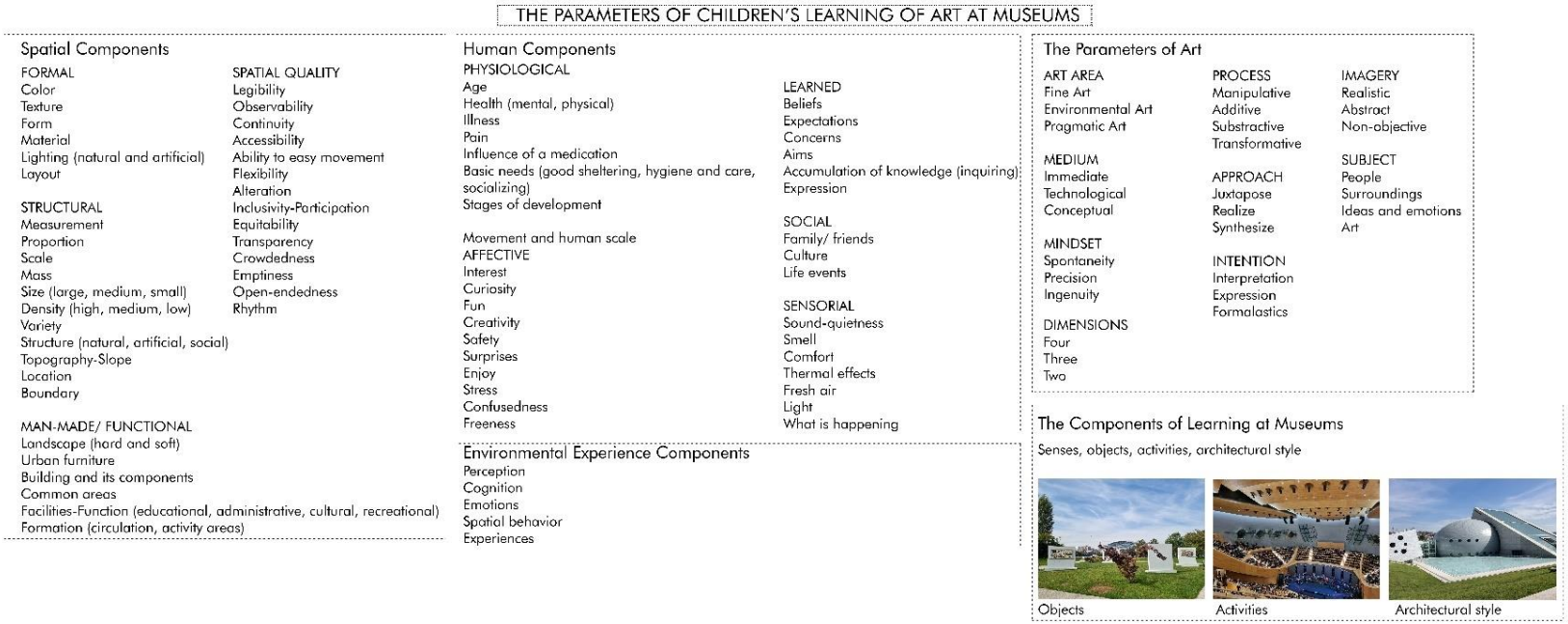


Figure 5.1. Variables of the study.

5.2 Case Study

This section provides information about the case study regarding the physical and administrative particularities of the selected site. Its analysis as a learning environment is at the heart of this case study due to the fact that this thesis evaluates museum settings' contributions to the learning of art and, in turn, the possibility of such settings to be learning environments for art. CerModern provides the setting of the case study.

Museums are among the main cultural facilities of cities, and so they have important roles in contributing to people's cultural knowledge. Furthermore, they are public spaces that all people can access. In terms of their spatial attributes, these public spaces feature both built-up and open spaces such as courtyards, squares, and gardens. For instance, there is a wide courtyard at the entrance of CerModern. The circulation is uncontrollable, independent, and free in this courtyard. In addition, there are different cultural activities taking place, such as outdoor sports activities and design markets, attracting people with different behavioral types. Thus, there is variety in activities providing a dynamic, social, and cultural environment for many people. It is important to provide activities in public spaces from which all people can benefit equally whether the space is built-up or not. Within the scope of this thesis, it is of considerable importance to analyze both indoor and outdoor museum settings to understand their effects on the learning of art.

5.2.1 One-to-one Interview

The children in the art studio named CerÇocuk at CerModern are participations of the survey. There were both male and female children and their ages varied. On the day when research for the case study was conducted, there was a special program held at CerÇocuk. Children gave their answers to the survey of the study while they were doing art activities.

Figure 5.2. Children on the day when research for the case study was conducted.

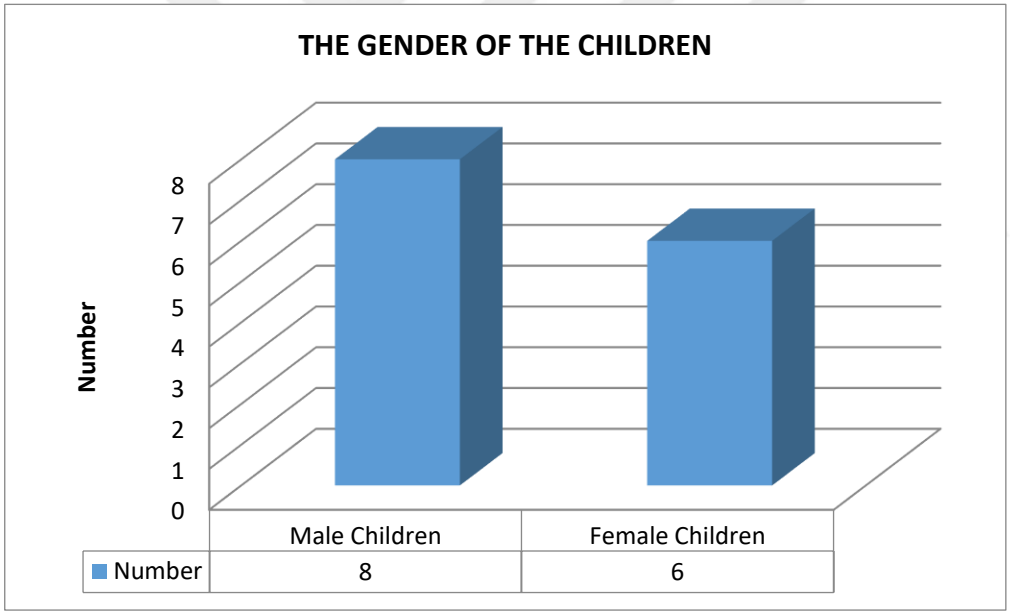


Figure 5.3. Gender of the children.

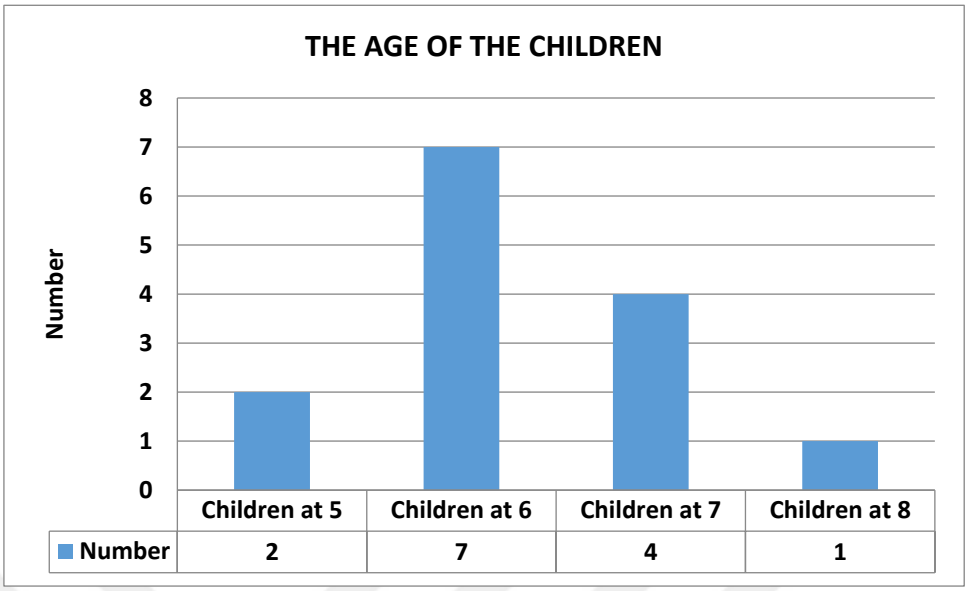


Figure 5.4. Age distribution of the children (years).

The age range of the children was from five to eight years. Fourteen children participated, six of whom were female while the others were male. It is important to take the different age groups into consideration while explaining what the children perceived in the settings of CerModern and how they related those perceived attributes of the settings to their knowledge of art.

5.2.2 Data Collection

Different tools may be used to collect data. In the present study, the tools included conversations with children involving the administration of a survey based on photographs of the indoor and outdoor settings of CerModern, the taking of photographs, and the recording of videos during the case study process.

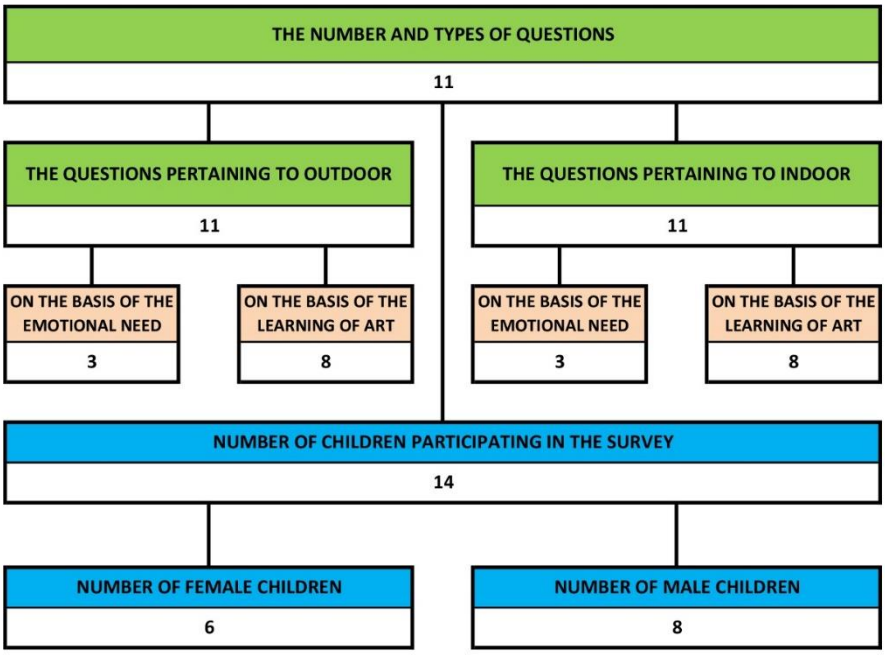


Figure 5.5. Number and types of questions.

The number of questions was eleven, and they addressed emotional needs and the learning of art for both indoor and outdoor settings.

5.2.2.1 Photographs

Children selected photographs of the indoor and outdoor settings of CerModern from two different posters and they shared their opinions of them through the survey. The author took the photographs at different times. In doing so, the author encountered different activities and spatial characteristics of the places within CerModern. For example, there was a design market and jazz concert in May on the same day, with the design market opening first and the jazz concert being held later in the day. Stands, tents for the market, and a stage for the concert were provided. There were also colorful pillows for people to sit on and enjoy the day. The author conducted a brief interview with a girl sitting on one of the pillows. Moreover, the weather was sunny this day. According to the answers of the participants, the photographs'

representations of colors and lights were prominent factors in the selection of those particular photographs. Thus, spatial characteristics that are abundant in terms of reflecting color and light are important for attracting children's attention.

Furthermore, the photographs represented different architectural styles, activities, and objects to evaluate the relationships between spatial characteristics and the learning of art.

5.2.2.1.1 Outdoor Settings

The outdoor settings of CerModern are diverse and have many spatial characteristics ranging from landscape elements to opportunities for activities. The first place attracting people's attention is the entrance to CerModern and the wide courtyard at the entrance. This courtyard hosts different activities such as design markets and concerts, making it a vital place at different times of the year. Even when there are not any activities taking place, it is still a prominent space with architectural components such as the wood and glass materials of the floor. According to the answers of the participants, these different materials captured their attention. The use of the senses is important for the development of children, who were the participants of this study, and appropriate spatial characteristics "call" children to look closer and touch them. Thus, spatial characteristics are significant in inspiring children to participate within the places where they are located and to benefit from them.

Table 5.1. Photographs of the outdoor settings of CerModern.

			
Number 1 Architectural Environment-CerModern Courtyard	**Number 2** Architectural Environment-CerModern Courtyard	**Number 3** Architectural Environment-CerModern Courtyard	**Number 4** Architectural Environment-CerModern Courtyard
			
Number 5 Architectural Environment-Parking Area and Its Surroundings	**Number 6** Architectural Environment-Landscape and Its Surroundings	**Number 7** Architectural Environment-Landscape and Its Surroundings	**Number 8** Activity-CerModern Courtyard, Design Market, and Jazz Concert
			
Number 9 Activity-CerModern Courtyard, Design Market, and Jazz Concert	**Number 10** Activity-CerModern Courtyard, Design Market, and Jazz Concert	**Number 11** Activity-CerModern Courtyard, Design Market, and Jazz Concert	**Number 12** Activity-CerModern Courtyard, Design Market, and Jazz Concert
			
Number 13 Object-Parking Area and Its Surroundings	**Number 14** Object-Parking Area and Its Surroundings	**Number 15** Object-Landscape and Its Surroundings	**Number 16** Object-Landscape and Its Surroundings

Table 5.1 presents sixteen photographs of the outdoor settings of CerModern. Each of them has unique spatial features. The first, second, third, fourth, fifth, sixth, and seventh photographs represent the architectural environment. Number 1 presents the CerModern courtyard, which connects the entrance and parking area of CerModern.

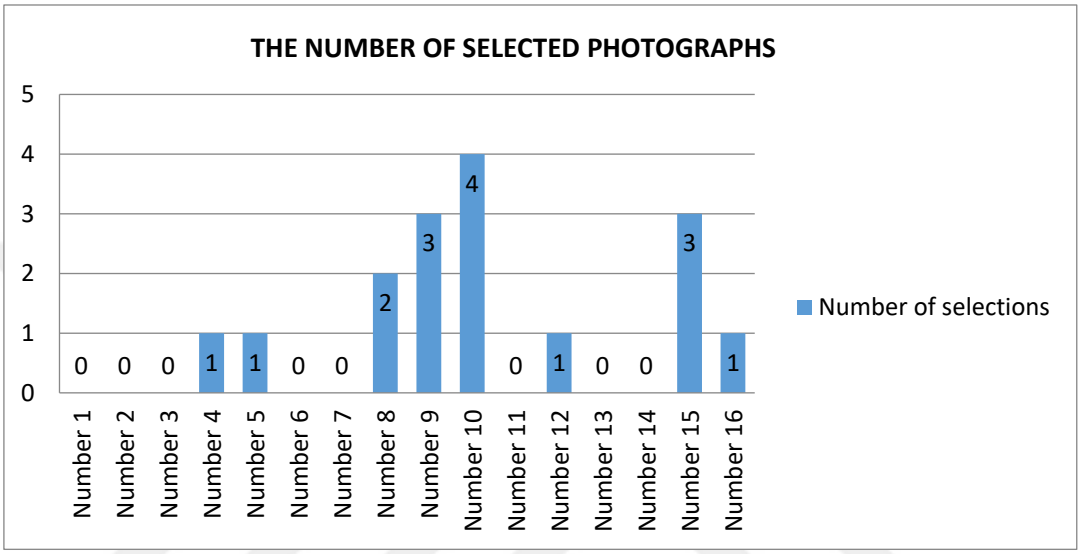


Figure 5.6. Numbers of selected photographs of outdoor settings.

Figure 5.6 shows how often each photograph of the outdoor settings of CerModern was selected by the participants. As seen here, photographs 1, 2, 3, 6, 7, 11, 13, and 14 were not chosen by any participants.

Table 5.2. Number, ages, and genders of the children who selected each photograph of outdoor settings.

NUMBER, AGES, AND GENDERS OF THE CHILDREN WHO SELECTED EACH PHOTOGRAPH OF OUTDOOR SETTINGS		
SELECTED PHOTOGRAPHS	DISTRIBUTION ACCORDING TO GENDER	
	MALE CHILDREN	FEMALE CHILDREN
Number 4	1 child (6 years old)	----
Number 5	1 child (6 years old)	----
Number 8	----	2 children (5 and 7 years old)
Number 9	3 children (5, 6, and 6 years old)	----
Number 10	1 child (7 years old)	3 children (6, 7, and 8 years old)
Number 12	1 child (6 years old)	----
Number 15	2 children (6 and 7 years old)	1 child (6 years old)
Number 16	1 child (6 years old)	----
Note: A male child 6 years of age selected numbers 5, 15, and 16 at the same time.		

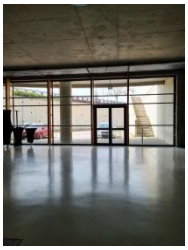
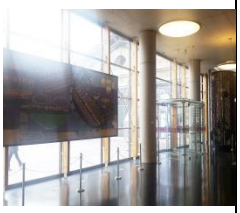
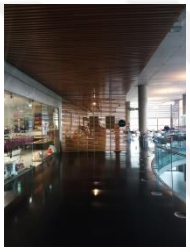
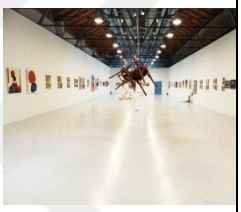
Table 5.2 presents the numbers of selections of each photograph of outdoor settings of CerModern and their distribution according to the gender of the participants. The differences in selections according to this distribution is important to take into consideration because gender may affect perceptions of the surrounding environment and, in turn, choices such as those made here. This means that diverse contributions were made to each participant's knowledge of art. For instance, this table shows that female children chose the eighth photograph while no male children chose that photograph.

5.2.2.1.2 Indoor Settings

There are various spatial particularities in the indoor settings of CerModern. For example, Özcan Uygur, an architect at Uygur Mimarlık, states that the use of wooden structures affects the atmosphere of the place and, in turn, emotions (Akbank Sanat, 2018). The context of the materials is important in stimulating the senses of the users of the place to help them make connections with the place. Being affected by the environment depends on having a connection with it. Thus, it is important to make strong connections between places and people. Children, who are eager to have their senses stimulated and more open to receiving the effects of their environments, should have strong connections with the environment through not only materials but also the opportunities provided by spatial characteristics that are appropriate for them. Just as CerModern hosts different activities outdoors, there is diversity of the activities indoors. Exhibitions, art studios, and dance performances are examples of indoor activities at CerModern.

In addition, Semra Uygur, an architect at Uygur Mimarlık, states that some elements pertaining to the old functions of the building have been protected, which shows the layeredness of the place. The stone wall and the rails in the courtyard are examples of this layeredness (Akbank Sanat, 2018).

Table 5.3. Photographs of the indoor settings of CerModern.

			
Number 1 Architectural Environment-Exhibition Area	**Number 2** Architectural Environment-Corridor	**Number 3** Architectural Environment-Entrance	**Number 4** Architectural Environment-Exhibtion Area
			
Number 5 Architectural Environment-Shop and Restaurant	**Number 6** Activity-Front of the Art Studio for Children	**Number 7** Activity-Front of the Art Studio for Children	**Number 8** Object-Exhibition Area
			
Number 9 Object-Front of the Art Studio for Children	**Number 10** Object-Art Studio for Children	**Number 11** Object-Exhibition Area	

There are eleven photographs of the indoor settings of CerModern in Table 5.3. Some of them show active participation, which is important for the effective use of senses and, in turn, learning. Informal learning occurs within daily life. Thus, places that are inviting by way of their spatial characteristics are important for providing

these kinds of opportunities. According to the answers of the children, the colors and lighting in different places are especially attractive spatial attributes. Thus, the photographs emphasizing colors and lighting were prominently selected by the participants.

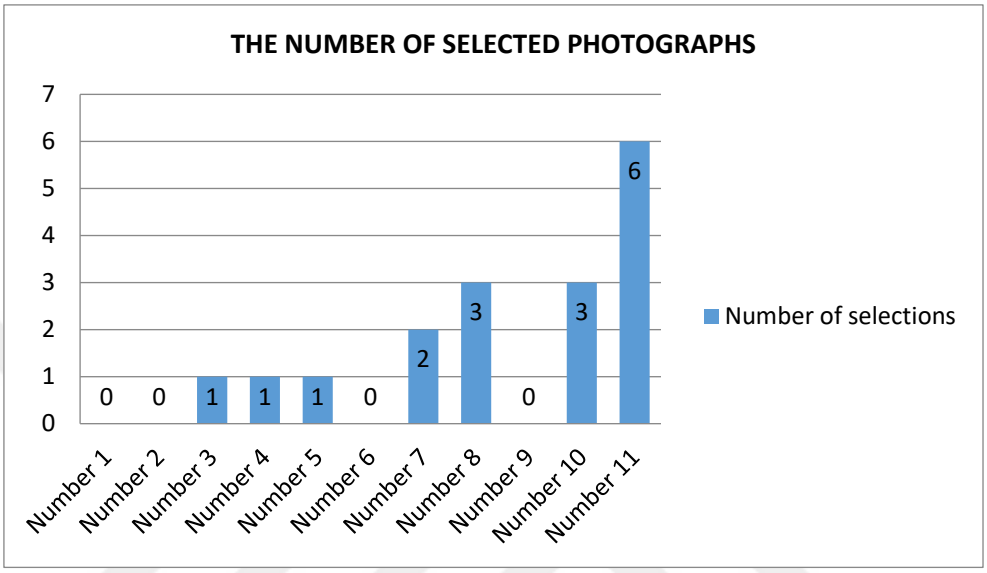


Figure 5.7. Numbers of selected photographs of indoor settings.

Figure 5.7 indicates that the first, second, sixth, and ninth photographs were not attractive as they were not selected by any of the children. On the other hand, the eleventh photograph had the highest selection rate among all of the photographs of indoor settings. The reason for this was likely the teddy bears, which are important for children, who need to play to support their development. Photographs 3, 4, and 5 were less interesting among the photographs that were selected.

Table 5.4. Number, ages, and genders of the children who selected each photograph of indoor settings.

NUMBER, AGES, AND GENDERS OF THE CHILDREN WHO SELECTED EACH PHOTOGRAPH OF INDOOR SETTINGS		
SELECTED PHOTOGRAPHS	DISTRIBUTION ACCORDING TO GENDER	
	MALE CHILDREN	FEMALE CHILDREN
Number 3	1 child (6 years old)	----
Number 4	1 child (6 years old)	----
Number 5	----	1 child (8 years old)
Number 7	2 children (6 years old)	----
Number 8	2 children (6 and 7 years old)	1 child (7 years old)
Number 10	1 child (6 years old)	2 children (6 and 7 years old)
Number 11	4 children (5, 6, 6, and 7 years old)	2 children (5 and 6 years old)

Table 5.4 shows that the eleventh photograph was selected most often while the third, fourth, and fifth photographs were selected less often from among the photographs that the children chose. The eleventh photograph portrays many colorful teddy bears, and this attracted the children's attention to the place since children love colorful things. Lighting is another important point for the perception of the attributes of a place whether it pertains to an object or not, but in particular, the visibility and features of objects depend on the lighting conditions. Children need to have their senses stimulated in a comfortable way, and so lighting conditions are significant for providing appropriate places for the stimulation of children's senses.

5.2.2.2 The Survey

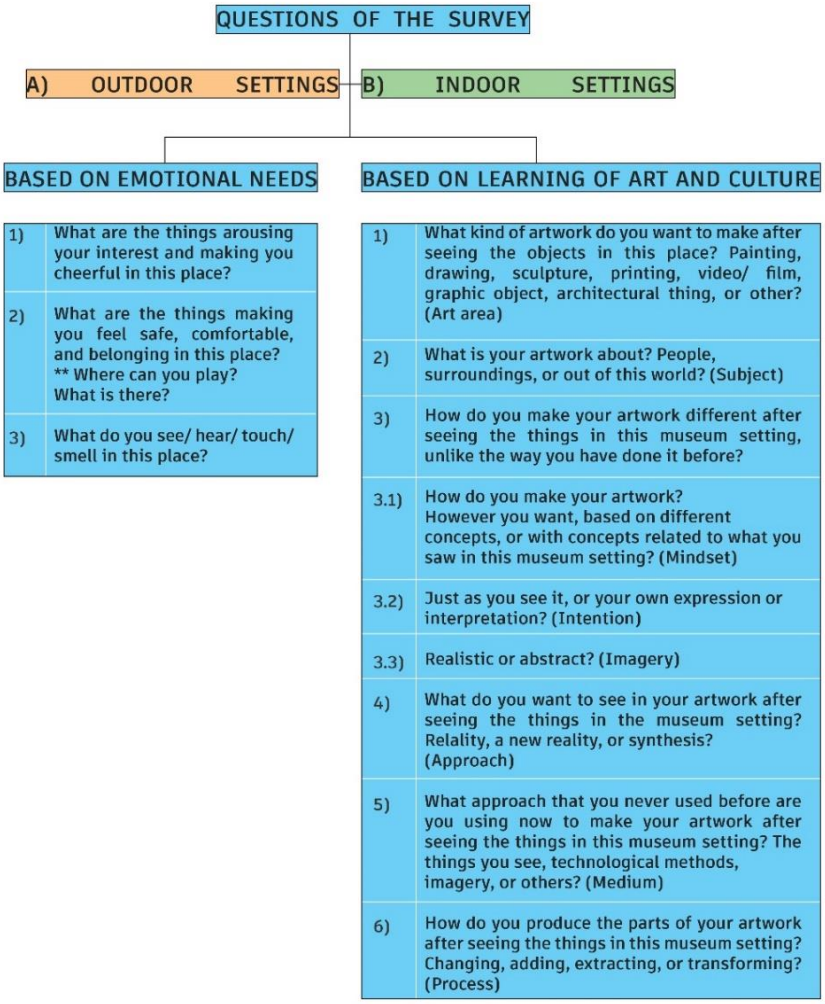


Figure 5.8. The questions of the survey.

The literature review shaped the questions listed in Figure 5.8, which were used to evaluate relationships between the spatial characteristics of the selected places and children's learning of art. For example, the literature review of forms of art clarified the questions to be asked pertaining to the learning of art. After showing them the photographs of the indoor and outdoor areas of CerModern on two different posters, the author asked the children: "Which one is the most interesting photograph for you? Which one made you feel happiest?" Later, the children gave their answers to the questions in Figure 5.8 addressing their emotional needs and the learning of art.

CHAPTER 6

RESULTS AND DISCUSSION

This chapter presents the results of the case study. Subsequently, the contributions made by this thesis within the scope of the field of urban design are discussed together with the limitations that emerged in the data collection process regarding the literature review and case study. The results of the case study and their implications for the field of urban design are given particular emphasis in this chapter. Recommendations for future research are also offered based on the information collected via both the literature review and the case study. Overall, this chapter provides a wholistic view of the research conducted for this thesis and an evaluation of the study site from the perspectives of the fields of urban design and the learning of art. At the end of the chapter, the research questions and related hypotheses are presented again in relation to the findings of the literature review and the results of the case study.

6.1 Results of the Case Study

This section explains the inferences drawn from the case study based upon both indoor and outdoor settings. There are common points between them as colors, touchable items, and acoustic materials are particularly attractive spatial characteristics for children. These stimulate their senses and support their connections with places. In terms of emotional needs, most of the indoor and outdoor settings are safe for children. One reason for this is that the various places of CerModern have defined borders with other masses and landscape elements. Thus, overall, it is a built-up open space that provides safe, comfortable, and accessible routes. For children, feeling safe has priority among other needs such as playing and developing themselves. The findings of the case study confirmed that most of the

spaces of CerModern were safe for them. Most participating children stated that their emotional needs were fulfilled in the settings of CerModern.

6.1.1 Outdoor Settings

This section gives information about the results of the survey conducted with photographs representing different outdoor settings of CerModern.

Results Regarding Emotional Needs in Outdoor Settings

First, the children focused on the effects of spatial characteristics of the outdoor settings on their emotional needs such as safety and play in the survey of the case study.

Table 6.1. Things arousing their interest and making them feel cheerful in a place.

Answers	Frequency of Statements	Rate of Statements
People	8	**32%**
Objects (sculptures, different paintings, train, fountain, colorful cushions, products being sold)	7	**28%**
Glass surfaces (glass surface outdoors, the glass ceiling of the CSO building)	4	**16%**
Lights	2	**8%**
Floors	2	**8%**
Courtyard and fun environments	2	**8%**
Total	**25**	**100%**

Table 6.1 shows that the presence of people (32%) and objects (28%) were mentioned by nearly equal proportions of participants regarding things that attracted

their attention and made them feel cheerful. Different materials also captured their attention, such as glass, wood, and fabric. Light is another spatial characteristic that affects children's attention. It helps them perceive the attributes of their surroundings effectively. Thus, children stated that light drew their attention. Furthermore, colors and colorful things "paint" children's "worlds." Children love painting and use colors in order to express themselves. These have important places for children's perceptions of their environments and the use of their imagination. That is why children selected photographs that had vibrant colors and were related to painting.

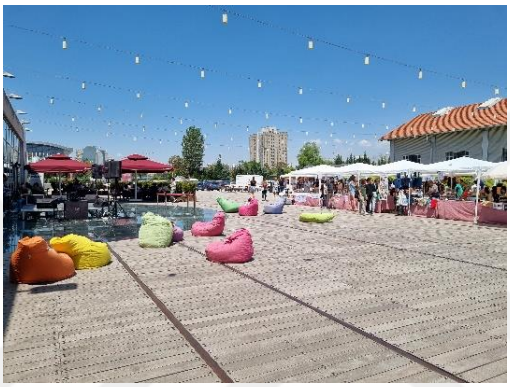


Figure 6.1. Colorful cushions.

Table 6.2. Things making children feel safe, comfortable, belonging, and playful.

Answers	Frequency of Statements	Rate of Statements
Feeling safe, comfortable, and playful	12	**75%**
Comfortable, not feeling safe, and no playfulness	4	**25%**
Feeling safe and comfortable, but no playfulness	0	**0%**
Not feeling safe and comfortable, but playfulness	0	**0%**
Total	**16**	**100%**

Table 6.2 confirms that most of the outdoor settings of CerModern made the children feel safe and comfortable. Three-fourths of all of their statements (75%) supported

this. Moreover, playfulness was common in the settings that they preferred. Some participants stated that they did not feel themselves to be safe and did not want to play in the setting hosting the design market due to the crowds, as they thought they could get lost. It was also stated by some that the glass surface at the entrance of the building could be broken, and so it was dangerous to be there.

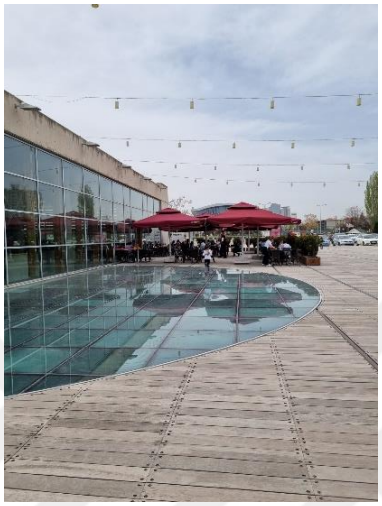


Figure 6.2. The glass surface at the entrance were deemed unsafe by some children.

Table 6.3. Things the children could see, hear, touch, or smell.

Answers	Frequency of Statements	Rate of Statements
Objects (sculptures, paintings, train, fountain, colorful cushions, products for sale, tables)	10	**31%**
People	6	**18%**
Lights	6	**18%**
Glass surfaces (glass surface outdoors, glass ceiling of the CSO building)	5	**15%**
Wood surfaces	2	**6%**
Smells (food smells from the restaurant, dyes from the exhibitions)	2	**6%**
Water of fountain	1	**3%**
Natural components (trees and shrubs)	1	**3%**
Total	**33**	**100%**

According to Table 6.3, one-third of all the participants' statements (31%) made reference to the presence of objects. These objects were the most interesting ones that stimulated the senses of the children. They had specific qualities such as material, size, and color. One participant stated that he wanted to run on the glass surface of the roof of the CSO building. Thus, objects are important for allowing children to develop their skills, test themselves, and enjoy by means of the stimulation of their senses. In contrast, the presence of natural components (3%) had less impact on their senses.

Figure 6.3. The view from the courtyard of CerModern to the CSO building.

Results Regarding the Learning of Art in Outdoor Settings

This study analyzed the relationships between spatial characteristics of places and children's learning of art. Part of the administered survey examined parameters of art such as the medium and subject. In this part of the survey, the children evaluated their formation of art skills and knowledge in light of what they perceived in these settings. Thus, they focused on the concept of art learning after the first part of the survey, which had addressed their emotional needs.

Table 6.4. Areas of art.

Answers	Frequency of Statements	Rate of Statements
Painting	11	**58%**
Sculpture	8	**42%**
Total	**19**	**100%**

Table 6.4 shows that over half of all replies (58%) made reference to painting. This might be because the children mostly encountered such activities related to art at

school. Another reason might be the paintings that they had seen at museums as places of collections of art. Other children chose sculpture as an area of art. There are sculptures both indoors and outdoors at CerModern. This might have had an impact on their choice.

Figure 6.4. The fountain in the green area at CerModern.

Table 6.5. Subjects of artworks.

Answers	Frequency of Statements	Rate of Statements
Related to the surroundings	9	**56%**
Out of this world	7	**44%**
Related to people	0	**0%**
Total	**16**	**100%**

Table 6.5 indicates that children pay attention to their surrounding environments. The presence of opportunities to stimulate their senses might be the reason for that. According to this table, nearly half of all statements (44%) referred to artwork having subjects out of this world. This might be because children have broad imaginations.

Figure 6.5. Design market at CerModern.

Table 6.6. Mindset.

Answers	Frequency of Statements	Rate of Statements
Concepts related to what I saw in this museum setting	9	**56%**
However I want	5	**31%**
Different concepts	2	**13%**
Total	**16**	**100%**

Table 6.6 shows that more than half (56%) of all statements made reference to concepts related to the surrounding environment. This emphasizes that the surrounding environment has important effects on children's imagination. One-third of all statements (31%) described creating their artworks "however I want." This means that children tend to use their imaginations. As Jean Piaget stated, abstract concepts form in the minds of children in later developmental stages.

Table 6.7. Intention.

Answers	Frequency of Statements	Rate of Statements
Just as I see it	7	**44%**
By my own expression	5	**31%**
By interpretation	4	**25%**
Total	**16**	**100%**

Table 6.7 reveals that the attributes perceived by children are significant in shaping their imagination. More than one-third of all statements (31%) referred to the things the participants saw. Children receive the effects of the environment and shape their lives from different perspectives such as health and culture. On the other hand, one-fourth of all statements (25%) referred to interpretation. This shows children's ability to use their imagination, but they are still mostly influenced by their surrounding environments.

Table 6.8. Imagery.

Answers	Frequency of Statements	Rate of Statements
Realistic	9	**56%**
Abstract	7	**44%**
Total	**16**	**100%**

Table 6.8 addresses the fact that abstract concepts emerge in the later developmental stages of children. That is why participants aged between five and eight focused on realistic concepts. More than half of all statements (56%) referred to realistic imagery.

Table 6.9. Approach.

Answers	Frequency of Statements	Rate of Statements
A new reality	8	**50%**
Reality	8	**50%**
Synthesis	0	**0%**
Total	**16**	**100%**

Table 6.9 shows that children like using their imagination.

Figure 6.6. The green area of CerModern with a view of the CSO building.

Table 6.10. Medium.

Answers	Frequency of Statements	Rate of Statements
Things that I see	12	**75%**
Imagery	4	**25%**
Technological methods	0	**0%**
Total	**16**	**100%**

Table 6.10 shows that three-fourths of all statements (75%) referred to the surrounding environment. This finding emphasizes the relationship between children's surrounding environments and their use of imagination. The participants preferred to use things in the way that they were seen to create their artworks. There were no answers about technological methods.

Table 6.11. Process.

Answers	Frequency of Statements	Rate of Statements
Adding	9	**33%**
Changing	7	**26%**
Transforming	6	**22%**
Extracting	5	**19%**
Total	**27**	**100%**

Table 6.11 shows that the participants particularly liked adding parts to their artworks. One-third of the statements (33%) described artistic processes through addition. The other answers were chosen at relatively equal rates.

6.1.2 Indoor Settings

After reviewing the information obtained from answers related to the outdoor settings of CerModern, answers about the indoor settings were then analyzed to evaluate the children's place perception and perceived attributes of places within CerModern from a wholistic perspective. The definition of a place allows for both built-up and open spaces. Thus, indoor, and outdoor settings should not be discriminated from each other.

Results Regarding Emotional Needs in Indoor Settings

Just as the participants responded to questions regarding their emotional needs in the outdoor settings of CerModern, they also shared opinions pertaining to those needs indoors.

Table 6.12. Things arousing their interest and making them feel cheerful.

Answers	Frequency of Statements	Rate of Statements
Objects (teddy bears, paintings, chairs, craft shop, materials)	15	**79%**
Other children	2	**11%**
Painting children	1	**5%**
Children's art studio	1	**5%**
Total	**19**	**100%**

According to Table 6.12, objects, and especially teddy bears, were the most preferred things that had positive impacts on the children's interest. More generally, more than two-thirds of all statements (79%) made reference to the presence of objects. The children said that teddy bears, paintings, chairs, the craft shop, and materials made them curious. For instance, chairs were present at an exhibition, and this was attractive to them. However, one of the participants stated that there should not be

any play activities at the craft shop because there was a probability of the artworks being broken. This showed that previous experiences like visiting the craft shop affected their answers. In addition, the teddy bears at an exhibition were referenced most often among all possible answers. This is because children at these ages need to develop their skills and play has a significant role in achieving that. Teddy bears are common toys in children's processes of play. Seeing them made the children remember that they have played with such toys before and triggered their desire to play. Merleau-Ponty (1948) states that the origins of objects are what the objects express to people. The teddy bears at the exhibition expressed play for the children. This drew their attention and affected their preferences.

Interestingly, the children's art studio where they created various artworks was the least commonly selected answer. This shows that places that seem to provide opportunities specifically for playing are appealing to children as play is one of their basic needs.

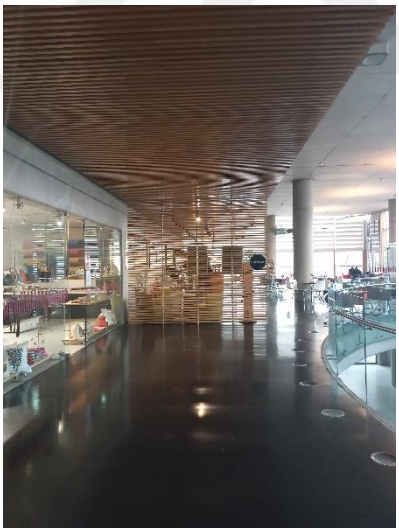


Figure 6.7. The craft shop on the left.

Table 6.13. Feeling safe, comfortable, belonging, and playful.

Answers	Frequency of Statements	Rate of Statements
Feeling safe, comfortable, and playful	14	**82%**
Comfortable, not feeling safe, and no playfulness	1	**6%**
Feeling safe and comfortable, but no playfulness	1	**6%**
Not feeling safe and comfortable, but playfulness	1	**6%**
Total	**17**	**100%**

According to Table 6.13, more than three-fourths (82%) of all statements referred to safety, comfort, and playfulness. This indicates that most considered indoor settings were safe and offered opportunities that were comfortable and playful.

Figure 6.8. Teddy bears in the exhibition at CerModern.

Table 6.14. Things that they could see, hear, touch, or smell.

Answers	Frequency of Statements	Rate of Statements
Objects (teddy bears, lights, chairs, tables, paper, crayons, items in the shop, books, ropes, tall object around which the teddy bears were located, stairs)	17	**47%**
Art items (paintings, colors, dye, sculptures)	13	**36%**
People (children, teacher)	2	**6%**
Architectural items (walls, columns)	2	**6%**
Natural items (birds)	1	**2.50%**
"Beauties" of a large painting	1	**2.50%**
Total	**36**	**100%**

Table 6.14 reveals that half of all statements (47%) referred to objects. This shows that colorful objects are particularly attractive for children. There were colorful teddy bears at one exhibition. Besides their need for play, the colors also drew their attention. Moreover, one participant expressed the "beauties," in his own words, of the large painting located at the entrance of CerModern.

Figure 6.9. The large painting at the entrance of CerModern.

Results Regarding the Learning of Art in Indoor Settings

Similar to the outdoor settings, the participants also focused on indoor settings from the perspective of their learning of art and culture.

Table 6.15. Areas of art.

Answers	Frequency of Statements	Rate of Statements
Painting	15	**88%**
Sculpture	2	**12%**
Total	**17**	**100%**

Table 6.15 shows that more than three-fourths of all participants (88%) preferred painting in terms of different areas of art.

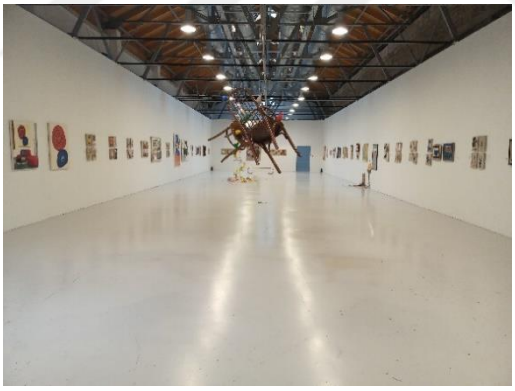


Figure 6.10. An exhibition at CerModern.

Table 6.16. Subjects of artworks.

Answers	Frequency of Statements	Rate of Statements
Related to the surroundings	13	**76%**
Out of this world	3	**18%**
Related to people	1	**6%**
Total	**17**	**100%**

Table 6.16 emphasizes the importance of the surrounding environment and its strong connections with children both outdoors and indoors. According to these findings, more than two-thirds of all statements (76%) referred to the use of the surroundings as artistic subjects.

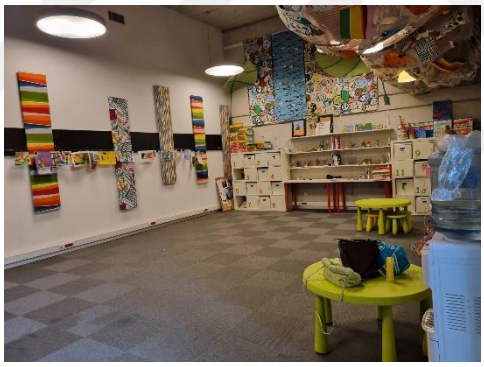


Figure 6.11. Children's art studio at CerModern. Emphasizing the importance of the surrounding environment and its strong connections with children both outdoors and indoors.

Table 6.17. Mindset.

Answers	Frequency of Statements	Rate of Statements
Concepts related to what I saw in this museum setting	12	**71%**
However I want	5	**29%**
Different concepts	0	**0%**
Total	**17**	**100%**

As seen in Table 6.17, more than two-thirds of all statements (71%) made reference to concepts in the surrounding environment at the museum. Similarly to the answers given for the outdoor areas, the children's surrounding environments in the indoor areas had many different impacts on them. Thus, many participants stated that concepts emerged from the things they saw indoors at the museum to influence the ways in which they created their artworks.

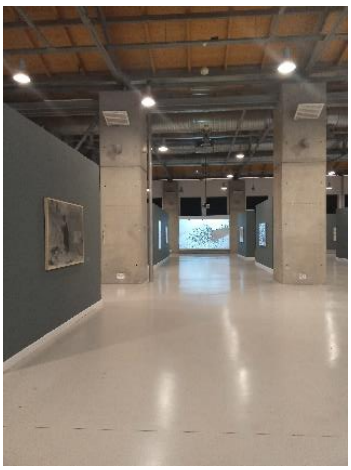


Figure 6.12. An exhibition at CerModern.

Table 6.18. Intention.

Answers	Frequency of Statements	Rate of Statements
Just as I see it	8	**47%**
By my own expression	5	**29%**
By interpretation	4	**24%**
Total	**17**	**100%**

Table 6.18 supports the fact that the environment has effects on children, and receiving these effects helps children develop their imaginations and subsequently their knowledge of art. Nearly half of all replies to this question (47%) stated the intent of approaching artworks "Just as I see it."

Table 6.19. Imagery.

Answers	Frequency of Statements	Rate of Statements
Realist	12	**71%**
Abstract	5	**29%**
Total	**17**	**100%**

Table 6.19 shows that abstract concepts emerge in the minds of children as their developmental stages advance. In this case, over three-fourths of the statements (71%) revealed a realistic approach to imagery.

Table 6.20. Approach.

Answer	Frequency of Statements	Rate of Statements
Reality	10	**59%**
A new reality	7	**41%**
Synthesis	0	**0%**
Total	**17**	**100%**

As seen in Table 6.20, more than half of the statements (59%) referred to reality in the approach to art. This shows that children give importance and attention to their surrounding environments or, in other words, the real world. They are ready to be affected by this environment as they need to develop themselves. The real world that they see is important for their lives. That is why the most common answer to this question was "reality." Moreover, children tend to use their imaginations by means of different tools such as play or other activities related to art. Therefore, a new reality was another thing that some participants wanted to reflect in their artwork.

Table 6.21. Medium.

Answers	Frequency of Statements	Rate of Statements
Things that I see	12	**71%**
Imagery	5	**29%**
Technological methods	0	**0%**
Total	**17**	**100%**

Table 6.21 reveals that three-fourths of all statements (71%) referred to the presence of the things that the children saw in the evaluated settings. This table also highlights the use of imagination. Children of the age of those in the present participations often

use their imagination while doing activities. Artworks necessitate the use of the imagination. Thus, participants reported imagery as a way of creating artwork. The most common answer, however, was the things they saw. This confirms the importance of the perceived attributes of the real world in the formation of children's art.

Figure 6.13. Children painting indoors at CerModern.

Table 6.22. Process.

Answers	Frequency of Statements	Rate of Statements
Adding	13	**38%**
Transforming	9	**26%**
Changing	6	**18%**
Extracting	6	**18%**
Total	**34**	**100%**

Similarly to the answers to the question about artistic processes outdoors, it is clear from Table 6.22 that adding was the most preferred artistic process indoors, as well. Transforming, changing, and extracting were other ways of producing artworks.

6.2 Contributions of the Study from the Perspective of Urban Design

This study has sought to explain the relationships between people and places. With that aim, it has focused on the factors of people-place relationships in line with the findings from the literature review. Moreover, this study has also drawn on findings from the field of environmental psychology, which gives attention to relationships between people and places. A place includes a variety of information. For instance, a recreational park has natural and social components. There are different kinds of landscape elements and many opportunities for distinct activities. Each component has its own effects on people and, in turn, people give different responses to these components. They form their relationships with that place by receiving its effects and giving reactions to those effects. To continue with the same example, if this recreational park encourages people to spend time there thanks to its components, it becomes a symbol of the fulfillment of the need for recreation, increasing the re-visitability of the place. For instance, there may be concerts in the park, and people may enjoy those concerts while lying on comfortable surfaces such as the grass in the park. Therefore, the activities taking place in the park and other components such as the presence of a wide grassy area have impacts on the image of the place and its re-visitability. According to a brief discussion with a child in the scope of the present study, she enjoyed visiting CerModern because she is interested in the arts and she spends her time at CerModern in effective and joyful ways. Thus, in this place, she fulfills her need to develop her skills pertaining to art. It is obvious that the settings of CerModern provide her with a learning environment for art by means of its components. This study has elaborated on the spatial characteristics of this particular place and their impacts on children's learning of art. Accordingly, the spatial characteristics of a given setting offer opportunities for shaping children's understandings of art and culture. For example, lights and colors are prominent features of CerModern according to the participants of the presented case study. That is because children love vibrant colors. Lights, meanwhile, are important for visibility. Therefore, it is important to ensure that vibrant colors are easily perceived

by children in the places where they spend time. A place's spatial characteristics should fulfill this need and provide opportunities to contribute to children's learning of art. This study has shown that the opportunities provided by the spatial characteristics of museum settings form learning environments both indoors and outdoors for children, subsequently contributing to their understanding of art and culture. The context of the contributions depends on the place, whether it is indoors or outdoors, and its other spatial characteristics. CerModern, with its indoor and outdoor settings, has diverse spatial characteristics ranging from the building itself to its components, with a wooden structure on the floor, and color, which draws the attention of children by stimulating their senses and thus providing connections with the settings. As a result, children receive benefits from opportunities to expand their knowledge and insight through relations to art.

Another way in which this study supports the literature on urban design is by giving importance to the concept of the formation of art. There are different forms of art, such as literature or architecture. This study has attempted to further elaborate on the parameters of art, such as the medium and subject. This thesis has defined all of these components from different fields as the factors shaping relationships between children and places. Therefore, this study offers contributions to different fields, particularly including cognitive development, environmental psychology, studies of space and its characteristics, and the formation of art. At the same time, the perspectives of many different fields are combined within the larger field of urban design, which evaluates relationships between people and the spatial characteristics of places within cities. This thesis has aimed to examine such relationships at CerModern, which is a significant cultural place of Ankara, in order to evaluate the impacts of its spatial characteristics on children's learning of art.

6.3 Limitations of the Study

In the process of collecting data from both the literature review and the case study, some limitations were encountered. In the process of data collection, information

regarding the outdoor areas of museums that could be used in evaluations of their spatial characteristics and the effects of them on people was limited. Thus, there was a comparative lack of elaboration on these settings and of examples for evaluating the perceptual effects of the spatial characteristics of outdoor areas of museums. This constituted an obstacle in evaluating spatial characteristics from the perspective of outdoor spaces. Another limitation pertained to the case study is the participants of the case study needed further explanations of the questions included in the survey. The author asked the questions by giving examples to make the children feel more comfortable and understand the questions more clearly. This was because children grasp abstract concepts at later stages of their cognitive development. The ages of the participations ranged from five to eight, which posed an obstacle in terms of their abilities to answer questions related to abstract concepts. For example, one participant asked what "realistic" meant. Another obstacle was the limitation of time due to the predefined program of the art studio. The duration of the activities held at the art studio is fixed, and the present case study entailed questions pertaining to both indoor and outdoor settings, which was relatively time-consuming. Thus, it was necessary at times to rush while conducting the case study. The children gave their answers to the survey questions while they were doing activities in line with the program of the art studio.

6.4 Discussion Based upon Learning Environments at CerModern

As the overarching recommendation of this work, it is important for both educators and parents to find places where children can participate simultaneously in different art activities that will positively impact their imagination, as was seen in the presented case study.

The examples regarding the learning environments at CerModern also illustrate how CerModern provides learning environments both indoors and outdoors.

Figure 6.14. Alternative learning environments.

In summary, there are learning environments in both indoor and outdoor areas of CerModern. These offer contributions to children's learning of art by means of their spatial characteristics. There is diversity in these spatial characteristics, which allows for different ways of learning about art and, in turn, many opportunities to learn.

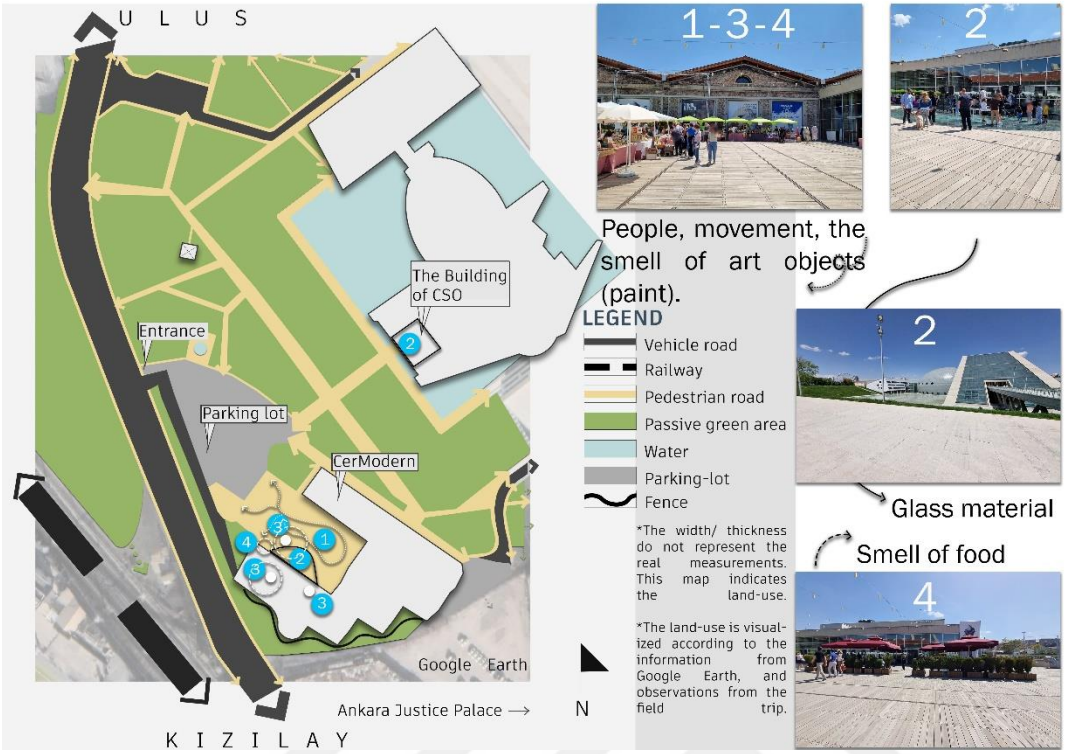


Figure 6.15. Spatialization of the survey results.

The figure above offers an example of the spaces defined by the participants according to their spatial characteristics. The glass material, people, and art objects were among the categories addressed in the survey questions. These make reference to the three main categories of art objects, the architectural environment, and activities. For example, one of the participants stated that playing along the glass façade of the building of the CSO would be very fun. Thus, that particular space contributes to the learning of art and culture by fulfilling emotional needs, which include enjoyment, or "having fun," through the spatial characteristics of the building. The photographs of this building presented above reveal that a pedestrian road provides a connection between this building and CerModern. Furthermore, there is glass material among the displays in the courtyard of CerModern. According to the survey results, this place seems frightening to some children, and this has impacts on their emotional needs and learning of art and culture. However, there are also opportunities within the settings of CerModern for using the senses, which is

essential for place perception. For example, one of the participants described the process of noticing the smells from the exhibition and the restaurant. Moreover, the participants provided their answers primarily based upon their surroundings and real-life items. Their stage of cognitive development provided a more limited perception of abstract things and so the concrete or real-life items in their surroundings, as depicted in the figure above, which highlights people and objects, were more attractive to them. Hence, CerModern, offering both indoor and outdoor settings, has extensive effects on children's learning of art and culture by means of spatial characteristics.

6.5 Recommendations for Future Research

The author recommends finding places where children can participate simultaneously in different art activities that will have positive impacts on their imagination, as was seen in the presented case study. The participants were active throughout the survey process and it was easy to engage them in discussions about art by asking questions such as what they might like to do in the settings of CerModern. Thus, they were engaged and ready to apply their imaginations while they were busy with their artworks. For instance, one of the participants stated that she wanted to make a painting in the style of Picasso. On the day when the case study was conducted, the children were informed about Picasso. Another recommendation is based on the parameters of art and it is recommended to give children examples while asking them questions related to abstract concepts to help them think about their answers in more depth due to the fact that children understand abstract concepts at further developmental stages. The author gave examples of putting teddy bears side by side while asking the children about the processes of creating their artworks. Another recommendation is based upon the forms of art. The focus can be diversified on different art forms and the researches can focus on one and only type of art. For example, there are sculptures of outdoor setting at CerModern. So, the aim of the research can be understanding the relationship between spatial attributes of the

outdoor and children's insight and knowledge of sculptures. Furthermore, there is a gap based upon formal and informal spaces of children. Holst et al. (2020) state that schools and playgrounds are formal ones are while informal ones include public spaces and interaction with people. This thesis focuses on different learning environments. Museums are evaluated as alternative formal, informal, and non-formal learning environments of art and culture according to the literature review. Their indoor and outdoor settings carry potentials to make children develop themselves as formal and informal spaces. So, there should be a consideration of these spaces at the settings of the museums to understand the formal and informal spaces for learning of art and culture. From the spatial aspect, children's insight and knowledge of art and culture should be evaluated from the perspective of the spatial attributes of indoor and outdoor both. Furthermore, researches should be conducted from the perspective of social learning in order to elaborate on informal learning spaces.

In this context, Holst et al. (2020) address the importance of the background of children. Further studies regarding the importance of different types of demographic data would help to diversify the results of the present case study because all children have their own unique backgrounds and, in turn, their own understandings of art and culture. The present case study supports this. Human components are important variables of this study. One of the participants chose the photograph that portrayed a large painting at the entrance of CerModern and mentioned the "beauties" of the painting. In other words, the painting as an object drew the attention of the participant toward the object and the place where that object was located. Researchers who are conducting work based on the unique backgrounds of children should focus on comprehensively understanding the diversity of their perceptions and the places of those perceptions in terms of the overall perceived spatial attributes of the case. At the same time, it is necessary to consider the processes of children's emotional development in any such research. Human components must be taken into consideration, and developmental stages are part of those components. This thesis has sought to fill this gap by considering the emotional needs of children, such as

interest and curiosity. However, more research is needed to address the stages of their emotional development in the context of understanding their relationships with the place from the perspective of human components.

All research conducted for the case study of this thesis was undertaken during daytime. Future research conducted during nighttime would also be valuable as the conditions of light, heat, noise and what is happening at any given time of the day all have effects on people (NSW Government, 2020). Thus, relationships with the place and the impacts of its spatial components differ according to time. Accessibility is a broadly important topic in architecture, urban design, and city planning and the use of the senses can be emphasized in this regard as the use of the senses is significant for place perception as well as movement.

Moreover, as Ord and Leather (2011) note, experiential learning is increasingly becoming more prominent. This type of learning is particularly essential for learning outdoors. CerModern has many passive green areas. In future studies, these could be examined from the perspective of experiential learning rather than emotional learning, the latter of which was the focus of the present thesis.

Finally, the concepts addressed here have been defined from the perspective of adults. Research based on colors could also be examined from the perspective of children, focusing on the meanings and effects of colors from their perspectives.

6.6 Findings

Three research questions were defined in accordance with the main aim of this thesis, which was explaining the effects of the spatial attributes of art museums on children's learning of art. The first research question: "What is the meaning of art for children?" The associated hypothesis was that art is a tool for expressing emotions and shaping the imaginative worlds of children. According to a literature review, children use the tool of art in diverse ways according to their levels of cognitive development. They perceive their surrounding worlds and interpret their

perceptions in accordance with their developmental stages. Therefore, the tool of art allows them to express their emotions, ideas, and place perceptions. The case study conducted for this thesis supports this claim. Most of the participating children stated that they wanted to produce art in line with their surroundings and what they saw. Thus, art is an important tool that supports explanations of perceptions of a place and an understanding of the meaning of those explanations for children. The second research question was: "How do children perceive the indoor and outdoor settings of museums as learning environments for art and culture?" The third research question was: "Do indoor and outdoor museum settings as perceived by children explain children's learning of art?" These final two questions were designed to focus on indoor and outdoor museum settings, children's perceptions of those settings, and the impacts of children's perceptions on their learning of art. The relevant hypothesis held that children have opportunities to expand their understanding and knowledge of art and culture in the settings of museums. In accordance with the literature review, it was concluded in this study that children can gain these opportunities through the objects, activities, and architectural environments offered by art museums. The case study presented in this thesis has confirmed that there are various learning environments for art and culture at museums and these are perceived by children through the objects, activities, and architectural places they encounter.

For example, as was noted in the literature review, water draws children's attention. Children find reflective materials interesting. It can accordingly be inferred from this case study that glass façades are points of attraction for children. Thus, the places that attract children's attention, and the spatial components of those places, support strong perceptions of the place and the relationships of individual children with that place. In turn, they contribute to understandings of art and culture through their spatial attributes.

REFERENCES

Abdel, H. (2022, March 15). *Ultimo public school / DesignInc + Lacoste + Stevenson + bmc2 architects*. https://www.archdaily.com/978467/ultimo-public-school-designinc-plus-lacoste-plus-stevenson-plus-bmc2-architectes

Akarsu, F. (1984). Piaget'ye göre çocukta mekan kavramının gelişimi. *Mimarlık Dergisi, 84/ 9,* 31-33.

Akyalçın, A. (2019). *Müze eğitiminin sanat kültürümüze ve yaratıcılık anlayışına katkıları* [Master's thesis]. Trakya Üniversitesi.

Aksoy, Y. (2011). Çocuk oyun alanları üzerine bir araştırma İstanbul, Isparta, Eskişehir, Erzurum, Kayseri, Ankara, Zonguldak ve Trabzon illeri örneği. *İstanbul Aydın Üniversitesi Dergisi*, *3*(11), 82-106. Retrieved from: https://dergipark.org.tr/tr/pub/iaud/issue/30056/324519.

Al Şensoy, S., & Midilli Sarı, R. (2019). Re-design of schoolyard for effective development of child from a universal design perspective. *Megaron 2019*, *14*(3), 443-459, doi: 10.14744/MEGARON.2019.72677.

Al-Thani, M. (2018). *Best practice 7 a tool to improve museum education internationally* (C. Angelini Ed.). Committee for Education and Cultural Action (CECA) of the International Council of Museums (ICOM).

Aslan, F., Aslan, E., & Atik, A. (2015). İç mekanda algı. *İnönü University Journal of Art and Design, 5*(11), 139-151, doi: 10.16950/std.60957.

Atacı, A. (2020). Researching of learning and space relations in children's museum. *Journal of International Museum Education, 2*(1), 28-53.

Ataöv, A. (1998). Environmental aesthetics. CPL Bibliography 349. *Journal of Planning Literature*, *13*(2).

Ataöv, A. (2005). Oyuna izin veren kentsel tasarım. *II. Türk Belediyecilik Sempozyumu: Çocuklar için güvenli kent (Uluslararası katılımlı)*, 9-10 March 2005, Hacettepe Üniversitesi ve Keçiören Belediyesi, Ankara, Türkiye.

Ataöv, A., & Haider, J. (2006). From participation to empowerment: Critical reflections on a participatory action research project with street children in Turkey. *Children, Youth and Environments, 16*(2), 127-152.

Ataöv, A. & Peker, E. (2020). *Belediyeler için çocuk ve çevre tasarım rehberi*. Cumhurbaşkanlığı Yerel Yönetim Politikaları Kurulu, Aile, Çalışma ve Sosyal Hizmetler Bakanlığı, Kent Araştırmaları Enstitüsü, İdealKent Yayınları, ADAMOR.

Aydemir, B. (2010). *Sanat eğitiminde müzelerin rolü: Ankara devlet resim ve heykel müzesi örneği*. [Dissertation]. T.C. Kültür ve Turizm Bakanlığı Güzel Sanatlar Genel Müdürlüğü.

Aytem, N. M. (2005). *Mimari mekanda renk, form ve doku değişkenlerinin algılanması* [Master's thesis]. İstanbul Teknik Üniversitesi.

Ásványi, K., Fehér, Z., & Jászberényi, M. (2021). The family-friendly museum: Museums through the eyes of families. *Muzeológia a kultúrne dedičstvo 2021*, *9*(1), 21-40, doi: 10.46284/mkd.2021.9.1.2.

Baksi, S. (2018). *Çocukların mekan algısının yaşam çerçevesi üzerinden incelenmesi* [Master's thesis]. Selçuk Üniversitesi-Hacettepe Üniversitesi.

Bal, A. (2005). *Zonguldak kenti yeşil alan sistemindeki çocuk oyun alanlarının durumunun peyzaj mimarlığı ilkeleri açısından irdelenmesi* [Master's thesis]. Zonguldak Karaelmas Üniversitesi.

Başkaya, A., Dinç, P., Aybar, U., & Karakaşlı, M. (2003). Mekansal imaj üzerine bir deneme: Gazi Üniversitesi Mühendislik Mimarlık Fakültesi Eğitim Bloğu Giriş Holü. *J. Fac. Eng. Arch. Gazi Univ., 18*(2).

Bilgin, N. (1984). Çocuk(lar) ve mekan(lar). *Mimarlık Dergisi, 84/ 9*(207), 18-22.

Buyurgan, S. (2019). *Müzede eğitim öğrenme ortamı olarak müzeler* (S. Buyurgan Ed.). Pegem Akademi Yayıncılık.

Cambridge Dictionary. (n.d.). Art. In *dictionary.cambridge.org dictionary*. Retrieved February, 2023, from https://dictionary.cambridge.org/dictionary/english/art

Canoğlu, S., & Geçimli, M. (2020). Çocuk ve mekan algısı üzerine bir uygulama. *International Journal of Interdisciplinary and Intercultural Art, 5*(10), 227-237, doi: 10.1093/bjsw/bcn142.

Cer Modern. (n.d.). Arkiv. https://www.arkiv.com.tr/proje/cer-modern/1535

Chawla, L. (2001). Growing up in cities. *UNESCO sources, 133*, p.4.

Cherry, K. (2023, March 11). *Classical vs. operant conditioning.* Verywillmind. https://www.verywellmind.com/classical-vs-operant-conditioning-2794861#:~:text=Classical%20conditioning%20involves%20associating%20an,voluntary%20behavior%20and%20a%20consequence.

Çağlar, S. (2019). *Achievement in and attitudes toward science* [Master's thesis]. Boğaziçi Üniversitesi.

Çermikli Buluklu, Y. (2015). *Çocuğun konut algısının sözel ve görsel temsiller üzerinden değerlendirilmesi* [Master's thesis]. Dokuz Eylül Üniversitesi.

Çolpan Erkan, N. (1996). *Çevre psikolojisi bağlamında çevresel imaj ve Beşiktaş meydanı örneği* [Master's thesis]. Yıldız Teknik Üniversitesi.

Değirmenci, Y., Bulut, A., & Kuzey, M. (2020). Okul öncesi öğrencilerinin mekan algısı ve yön becerilerine yönelik öğretmen görüşlerinin incelenmesi. *Bayburt Eğitim Fakültesi Dergisi, 2021, 16*(31), 21-38, doi: 10.35675/befdergi.069069.

Demirel, İ. N. (2019). *Kültür, uygarlık, sanat, müze, In: Müzede eğitim öğrenme ortamı olarak müzeler* (S. Buyurgan Ed.). Pegem Akademi Yayıncılık, pp.29-58.

Dilli, R. (2017). Öğretmenlerin müzelerin öğrenme ortamı olarak kullanımına ilişkin görüşleri. *Milli Eğitim Dergisi, 46*(214), 303-316.

Duman, S. (2018). *Sanatta insan-mekan ilişkisinde nesneler ve olaylara dönük anların tespiti* [The report of master's thesis artwork]. Hacettepe Üniversitesi.

Engelhart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, D. R. (1956). *Taxonomy of educational objectives. The classification of educational goals* (Benjamin S. Bloom Ed.). Longmans.

Eshach, H. (2007). Bridging in-school and out-of-school learning: Informal education. *Journal of Science Education and Technology, 16*(2), 171-190, doi: 10.1007/s10956-006-9027-1.

Ehinger, B. (2019, February 8). *What are the ley design features in Frank Lloyd Wright homes?* 360Modern. https://blog.360modern.com/key-design-features-frank-lloyd-wright-homes/2019/02/

Fairbanks, B. (2021, September 9). *5 educational learning theories and how to apply them.* https://www.phoenix.edu/blog/educational-learning-theories.html?_tt=42556818-0d94-403a-9662-12af9d878dcc

Fosnot, C. T., & Perry, R.S. (1996). *Constructivism: A psychological theory of learning. In: C. T. Fosnot (Ed.), Constructivsm: Theory, perspectives, and practice*. New York: Teachers College Press, pp.8-33, 2nd ed.

Giraudy, D. (1979). Museum museums and children (A. Erdös Editor-in-chief, I. Bettembourg Ed.). *United Nations Educational, Scientific and Cultural Organization, 1979, 31*(3), 177-188.

Gür, B. F. (2017). Evin topografyası: Çinici Mimarlık'ın mikroloft projeleri. *Mimarlık Journal, 398*, 36-42.

Gürdal, A. (2007). *Görsel sanatlar dersinde yapılandırmacı yaklaşıma dayalı öğretim uygulamalarına ilişkin öğretmen görüşleri*. [The abstract of master's thesis]. Anadolu Üniversitesi.

Gürpınar, C. (2000). *Mekan kurgusunun kullanıcılar üzerindeki psikolojik etkilerinin örneklerle incelenmesi* [Master's thesis]. Yıldız Teknik Üniversitesi.

Haase, P. N. (1979). Museum museums and children (A. Erdös Editor-in-chief, I. Bettembourg Ed.). *United Nations Educational, Scientific and Cultural Organization, 1979, 31*(3), 197-199.

Halsband, F. (2005). Campuses in place. *Places*, *17*(1), 4-11.

Hein, G. E. (1991). The significance of constructivism for museum education in the museum and the needs of people. *International Committee of Museum Educators Conference*, 15-22 October 1991, Lesley College, Massachusetts, USA, 1-10.

Hodge, J. C. (1979). Museum museums and children (A. Erdös Editor-in-chief, I. Bettembourg Ed.). *United Nations Educational, Scientific and Cultural Organization, 1979, 31*(3), 160-163.

Holst Laursen, L., Brorson Fich, L., Tvedebrink, T. D. O., Martin, M., Jelić, A., & Oehlwein, L. I. (2020). *Children, play, and the built environment. What can we learn from co-creation and embodied cognitive science?* CoC Playful Minds.

Hooper-Greenhill, E. (1999). *Müze ve galeri eğitimi (Museum and gallery education)* (B. Onur Ed., M. Ö. Evren, & E. G. Kapçı Trans.). Ankara Üniversitesi Çocuk Kültürü Araştırma ve Uygulama Merkezi Yayınları No:4, 1999.

ICOM. (2022, August 24). *Museum Definition*. ICOM. https://icom.museum/en/resources/standards-guidelines/museum-definition/#:~:text=Following%20the%20adoption%2C%20the%20new,exhibits%20tangible%20and%20intangible%20heritage.

Jack, G. (2008). Place matters: The significance of place attachments for children's well-being. *British Journal of Social Work, 2010*(40), 755-771, doi: 10.1093/bjsw/bcn142.

Johnson, J. M. (2000). *Design for learning: Values, qualities and processes of enriching school landscapes*. Landscape Architecture Technical İnformation Series, American Society of Landscape Architects, AICP.

Johanson, K., & Glow, H. (2012). 'It's not enough for the work of art to be great': Children and young people as museum visitors. *Journal of Audience & Reception Studies, 9*(1), 26-42.

Kalkanlı, D. (2019). *Investigation of streets as 'learning landscapes' for children: The cases of Ankara* [Master's thesis]. Orta Doğu Teknik Üniversitesi.

Karadeniz, C. (2010). Children's museums and necessity for children's museums in Turkey. *Procedia Social and Behavioral Sciences, 2*(2), 600-608, doi: 10.1016/j.sbspro.2010.03.070.

Karadeniz, C. (2013). Amerika Birleşik Devletleri'nde çocuk müzeleri: Miami Çocuk Müzesi örneği. *Folklor/ Edebiyat, 19*(74), 2013/ 2, 225-240.

Karadeniz Akdoğan, K., Durmaz, E., Kimzan, İ., & Acer, D. (2019). Museum workshops as a learning environment. *Journal of Ankara Studies*, *7*(2), 399-413.

Khatib, M., Sarem S. N., & Hamidi, H. (2013). Humanistic education: Concerns, implications and applications. *Journal of Language Teaching and Research, 4*(1), 45-51, doi: 10.4304/jltr.4.1.45-51.

Kuruoğlu Maccario, N. (2002). Müzelerin eğitim ortamı olarak kullanımı. *Uludağ Üniversitesi Eğitim Fakültesi Dergisi, 15*(1), 275-285.

Köse Doğan, R., & Baksi, S. (2019). Çocuk mekanlarında güncel tasarım yaklaşımları. *Journal of Near Architecture, 2019, 2*(2), 90-102.

Lang, J. T. (1994). *Urban Design: The American Experience* (Van Nostrand Reinhold Ed.). John Wiley & Sons Inc.

Lillard, P. P. (2013). *Montessori modern bir yaklaşım (Montessori – A modern approach)* (S. Darcan Çiftçi, C. K. Bağdatlı Ed., & O. Gündüz Trans.). Kaknüs Yayınları.

Lynch, K. (1960). *Kent imgesi* (*The image of the city)* (A. Berktay, & K. Özkan Ed., İ. Başaran, Trans.). Türkiye İş Bankası Kültür Yayınları, 2018.

Madanipour, A. (2003). *Public and private spaces of the city*. Routledge.

Marossy, A., & Olariu, M. (1979). Museum museums and children (A. Erdös Editor-in-chief, I. Bettembourg Ed.). *United Nations Educational, Scientific and Cultural Organization, 1979, 31*(3), 206-209.

Martini, M. C. (n.d.). *The fountain of love hidden Rome gems.* Welcome to Rome. https://www.tourist-in-rom.com/en/fountain-of-love/

Merriam-Webster. (n.d.). Learning. In *Merriam-Webster.com dictionary*. Retrieved June, 2022, from https://www.merriam-webster.com/dictionary/learning.

Mert, S. (2019). *In partial fulfillment of the requirements for the degree of master of science in architecture* [Master's thesis]. Orta Doğu Teknik Üniversitesi.

Munari, B. (1979). Museum museums and children (A. Erdös Editor-in-chief, I. Bettembourg Ed.). *United Nations Educational, Scientific and Cultural Organization, 1979, 31*(3), 203-205.

Mutal, S. (1979). Museum museums and children (A. Erdös Editor-in-chief, I. Bettembourg Ed.). *United Nations Educational, Scientific and Cultural Organization, 1979, 31*(3), 154-159.

Mutlu Kaya, D. (2020). *Non-formal öğrenme ortamlarının epizodik belleğe ve öğrenci başarısına etkisinin araltırılması: Enerji parkı* [Master's thesis]. Hacettepe Üniversitesi.

Nourjian, P. (2006). *Learning spaces* (D. G. Oblinger Ed.) (Ch.33). Educause. https://www.educause.edu/research-and-publications/books/learning-spaces

NSW Government (2020). *What factors can affect behaviour?* NSW Health, Australia. https://www.health.nsw.gov.au/mentalhealth/psychosocial/principles/Pages/behaviour-factors.aspx#

Ord, J., & Leather, M. (2011). The substance beneath the labels of experiential learning: The importance of John Dewey for outdoor educators. *Australian Journal of Outdoor Education*, *15*(2), 13-23.

Orewere, E., & Ogenyi, A. R. (2019). Soft landscaping and its impact in enhancing the status of Nigerian urban centres: A case of Jos city centre, Nigeria. *Journal of Envrionmental Sciences and Resources Management*, *11*(2), 17-36.

Orhan, M. (2021). Kamusal sanat etkinliklerinin kamusal alan kullanım değeri üzerindeki etkileri. *International Journal of Interdisciplinary and Intercultural Art*, *6*(12), 237-260, doi: 10.29228/ijiia.159.

Özbek A., D., & Ertürk, D. Z. (2017). Mekanı Anlama Üzerine Süreç Odaklı Bir Yaklaşım. *Tasarım+ Kuram Journal 13*(24), 79-89.

Özgece, N., Edgü, E., & Taluğ, M. (2015). Exploring children's perceptions and experiences of outdoor spaces. *Proceedings of the 10th International Syntax Symposium, London, 125*, 1-14.

Özsavaş Uluçay, N. (2017). Sanatın mekanı ve mekanın sanatı. *İdil, 6*(36), 2245-2257, doi: 10.7816/idil-06-36-07.

Özsavas Uluçay, N. (2019). Mekanın ögesi olarak çağdaş sanat. *The Journal of Social Sciences*, *6*(38), 132-138, doi: 10.16990/SOBIDER.5015.

Peker, E. (2010). *Campus as an integrated learning environment: Learning in campus open spaces* [Master's thesis]. Orta Doğu Teknik Üniversitesi.

Peker, E., & Ataöv, A. (2019). Exploring the ways in which campus open space design influences students' learning experiences. *Landscape Research*. doi: 10.1080/01426397.2019. 1622661

Merleau-Ponty, M. (1948). *Algılanan Dünya (Causeries)* (T. Birkan, Ed., & Ö. Aygün Trans.). Metris Yayınları, 2020.

Posner, J., Russell, J. A., & Bradley, S. P. (2005). The circumplex model of affect: An integrative approach to affective neuroscience, cognitive development, and psychopathology. *Development and Psychopathology, 17*(2005), 715-734, doi: 10.1017/S095457940505340.

Qatar Tourism (n.d.). *Visit the Msheireb museums*. Visit Qatar. https://www.visitqatar.qa/tr-tr/things-to-do/art-culture/museums-galleries/more-museums/msheireb-museums

Rasmussen, S. E. (1959). *Yaşanan mimari* (*Experiencing architecture)* (F. Öcal Ed.). Remzi Kitabevi, 2018.

Rennie, L. J., & McClafferty, T. P. (1995). Using visits to interactive science and technology centers, museums, aquaria and zoos to promote learning in science. *Journal of Science Teacher Education, 6*(4), 175-185.

Riedler, M. (2016). Sanat müzelerinde öğretme ve öğrenme kuramları ve bu kuramların müze uygulamalarını oluşturma şekillendirme ve dönüştürmeye yönelik etkileri. *Mediterranean Journal of Educational Research, 19*, 61-78.

Robinson, T., Nathan, A., Murray, K. & Christian, H. (2022). Parents' perception of the neighbourhood built environment are associated with the social and emotional development of young children. *International Journal of Environmental Research and Public Health, 2022, 19*(116476.

Russell, J. A. (1980). A circumplex model of affect. *Journal of Personality and Social Psychology, 1980, 39*(6), 1161-1178.

Said, I. (2007). *Architecture for children: Understanding children perception towards built environment*. Universiti Teknologi Malaysia, 2007.

San, İ. (2020). *Çocuk ve sanat* (M. Akoğuz, Ed.). Yeni İnsan Yayınevi, 2020.

Sheikh Asadi, F., & Hojat, I. (2020). Investigation of place components affecting the child's perception of the school environment utilizing q-sort methodology. *Int. J. Architect. Eng. Urban Plan, 30*(2), 184-197, doi: 10.22068/ijaup.30.2.184.

Sümer, H. N. (2020). *Maurice Merleau-Pınty fenomenolojisinde ve performans sanatlarında 'beden': Marina Abramovic* [Master's thesis]. İzmir Katip Çelebi Üniversitesi.

Sylva, R. (1988). The parameters of art. *Based on a paper presented at the Annual Meeting of the National Art Education Association,* 8-12 April 1988, Los Angeles, CA.

Şimşek, B. (2018). *Maurice Merleau-Ponty'de beden ve sanat* [Master's thesis]. Aydın Adnan Menderes Üniversitesi.

Şimşek, H., Yıldız, E. M., & Danacı Polat, B. (2019). *Müze ve müzecilik, In: Müzede eğitim öğrenme ortamı olarak müzeler* (S. Buyurgan Ed.). Pegem Akademi Yayıncılık, pp.7-28.

Şen, E. B., & Öksüz, C. (2016). Ankara'daki engelsiz parkların engelli çocukların kullanımına uygunluğunun değerlendirilmesi (Evaluation of barriers to use the unimpeded playing parks among disabled children in Ankara). *Ergoterapi ve Rehabilitasyon Dergisi, 2016*, *4*(1), 15-26.

Şentürk, E., & Altınçekiç, T. H. (2018). Elements of hard landscape design and new approaches on their use. *Kastamonu University Journal of Forestry Faculty, 2018*, *18*(3), 327-340.

TDK (Türk Dil Kurumu/ Turkish Language Society Dictionary). (n.d.). Mekan. In *Türk Dil Kurumu Sözlükleri (Dictionaries of the Turkish Language Association)*. Retrieved January, 2023, from https://www.sozluk.gov.tr

TDK (Türk Dil Kurumu/ Turkish Language Association). (n.d.). Müze. In *Türk Dil Kurumu Sözlükleri (Dictionaries of the Turkish Language Association)*. Retrieved February, 2023, from https://www.sozluk.gov.tr

Timeline. (n.d.). Seven Magic Mountains. https://sevenmagicmountains.com/timeline/

Ugo Rondinone Seven Magic Mountains: A large scale desert artwork Las Vegas, Nevada. (n.d.). Seven Magic Mountains. https://sevenmagicmountains.com/

Ünal, F., & Pınar, Y. (2017). Erken çocukluk eğitiminde müze deneyiminin rolü. *İdil, 2017, 6*(38), 12-15, doi: 10.7816/idil-06-38-18.

Van Wengen, G. (1979). Museum museums and children (A. Erdös Editor-in-chief, I. Bettembourg Ed.). *United Nations Educational, Scientific and Cultural Organization, 1979, 31*(3), 148-152.

Walker, S. (2021, October 26). *Introduction: What are the 7 art forms?* Contemporary Art Issue. https://www.contemporaryartissue.com/what-are-the-7-forms-of-art-a-complete-overview/

Western Governors University (2020, June 8). *Experiential learning theory*. Western Governors University Blog. https://www.wgu.edu/blog/experiential-learning-theory2006.html#close

Williams, P. (1982). Object-oriented learning in art museums. *Roundtable Reports, 7*(2), 12-15.

Yıldırım, H. (2015). *Ortaokul öğrencilerinin sanat gelişiminde müzelerin etkisi* [Master's thesis]. İstanbul Arel Üniversitesi.

Yunt, E. (2015, December 18). *Cermodern'in tarihi*. Cermodern. http://emiryunt2.weebly.com/blog/cermodernin-tarihi

Yücel Coşar, M. (2017). *Artistik yüzey seramiklerinin mekan ve çevreye uygunluğu* [Master's thesis]. Mimar Sinan Güzel Sanatlar Üniversitesi.

Zeyrek Çepehan, İ. & Güller, E. (2020). Evrensel tasarım kapsamında herkes için erişilebilir tasarım. *Sosyal Politika Çalışmaları Dergisi, Erişilebilirlik Özel Sayısı 2, ISSN: 2148-9424,* 383-410, doi: 10.21560/spcd.vi.818236.

Zhou, M. Y. & Brown, D. (2017). *Educational learning theories*. GALILEO, University System of Georgia.

Aydoğan, R. (n.d.). *Untitled illustration of the play Cavalleria Rusticana* [Photograph]. AA. https://www.aa.com.tr/tr/kultur-sanat/operanin-vazgecilmez-eseri-cavalleria-rusticana-dobda-perde-diyecek/2444708

Boardman, B. (n.d.). *Untitled illustration of Ultimo Public School* [Online image]. ArchDaily. https://www.archdaily.com/978467/ultimo-public-school-designinc-plus-lacoste-plus-stevenson-plus-bmc2-architectes

Cercocuk. (2022, June 12). *Cezer'in Olağanüstü Makineleri sergisi kapsamında - Kendi Makinemizi resmediyoruz-.* [Online image]. Instagram. https://www.instagram.com/p/CesgJM-IxQR/

Cercocuk. (2022, June 14). *Geleceği ve Geleneği dokumak sergisi kapsamında çocuklar sergiyi gezip, sergiden ilhamla kendi hayal güçlerini, yaratıcılıklarını ve el becerilerini birleştirebilecekleri panolar yaptılar.* [Online video]. Instagram. https://www.instagram.com/p/Cex-3reosyu/

Fujii, K. / TOREAL. (2022). *Untitled illustration of YNS Yamaikarashi Nursery School* [Online image]. ArchDaily. https://www.archdaily.com/988741/the-center-for-early-childhood-education-and-care-takeru-shoji-architects?ad_source=search&ad_medium=projects_tab

Google. (n.d.). [Google Earth map of CerModern]. Retrieved May 7, 2022, from https://earth.google.com/web/search/Anafartalar,+Cermodern,+Alt%c4%b1nsoy+Caddesi,+S%c4%b1hh%c4%b1ye+%2f+Alt%c4%b1nda%c4%9f%2fAlt%c4%b1nda%c4%9f%2fAnkara/@39.9316223,32.849489,847.51919809a,797.48909073d,35y,18.2585568h,42.82073092t,0r/data=CsABGpUBEo4BCiUweDE0ZDM0ZWY5ZWJmMTcxYjU6MHg3ZjhkMTE1ZWUxZGJmOWFjGbZcR2Y_90NAIeenOA68bEBAKlNBbmFmYXJ0YWxhciwgQ2VybW9kZXJuLCBBbHTEsW5zb3kgQ2FkZGVzaSwgU8SxaGjEsXllIC8gQWx0xLFuZGHEny9BbHTEsW5kYcSfL0Fua2FyYRgCIAEiJgokCcW5EpajwjRAEcK5EpajwjTAGR-wCOjcLiJAIcbVC7h5XFfA

Studio Bauhaus. (n.d.). *Untitled illustration of playing children* [Online image]. ArchDaily. https://www.archdaily.com/781271/an-kindergarten-hibinosekkei-plus-youji-no-shiro

Mallison, L. (n.d.). *Untitled illustration of Isabella Stewart Gardner Museum* [Online image]. Boston Magazine. https://www.bostonmagazine.com/arts-entertainment/best-museums-in-boston/

Monet, C. (1875). *Taking a Walk Near Argenteuil* [Painting]. Oggusto. https://www.oggusto.com/sanat/sanatci/claude-monet-hayati-eserleri-hakkinda-az-bilinenleri

Sygic Traveler. (n.d.). *Brooklyn Bridge Park* [Online image]. Sygic Travel Maps. https://travel.sygic.com/tr/poi/brooklyn-koprusu-parki-poi:34990

Untitled playing children at coast [Online image]. Land art for kids. https://www.landartforkids.com/how-to-make-land-art.html

Untitled illustration of Museum Voorlinden [Online image]. Chapter Travel. https://www.chaptertravel.com/museum-voorlinden-day-trip-in-the-netherlands/

Untitled illustration of Seven Magic Mountains [Online image]. Seven Magic Mountains. https://sevenmagicmountains.com

Untitled illustration of houses at the Bedford Square [Online image]. Sotheby's Institute of Art. https://www.sothebysinstitute.com/news-and-events/news/the-history-of-our-home-bedford-square

Untitled illustration of houses at the Bedford Square [Online image]. Sotheby's Institute of Art. https://www.sothebysinstitute.com/news-and-events/news/the-history-of-our-home-bedford-square

Untitled illustration of Melodier vid torget [Online image]. Göteborgs Symfoniker. https://www.gso.se/upptack/podiet/xet-pa-tvattlinan/

Untitled illustration of Untitled illustration of Colorful Blue Seats [Online image]. Contemporist. https://www.contemporist.com/seating-added-to-make-sitting-on-stairs-more-comfortable/

Untitled illustration of an outdoor concert at North Carolina Museum of Art [Online image]. North Carolina Museum of Art. https://ncartmuseum.org/events-and-exhibitions/programs/performances-and-concerts/

Untitled illustration of children playing at a street [Online image]. London Play. https://londonplaystreets.org.uk/about/london-play/

Untitled illustration of the book Cuore [Online image of book cover]. Amazon. https://www.amazon.ca/Cuore-Heart-english-Edmondo-Amicis/dp/184902281X

Untitled illustration of the film The Pursuit of Happyness [Online image]. Türkiye Zeka Vakfı. https://www.tzv.org.tr/#/haber/5189

Untitled illustration of the Presidential Symphony Orchestra of Türkiye [Photograph]. Event news online. https://eventnews.online/2023/03/14/cumhurbaskanligi-senfoni-orkestrasi-canakkale-zaferinin-108-yildonumunu-kutluyor/

Untitled illustration of Louvre Museum [Online image]. Gezicenga. https://gezicenga.com/louvre-muzesi/

Untitled illustration of İstanbul Toy Museum [Online image]. Seyyahız. https://seyyahiz.biz/hayal-dunyasina-yolculuk-goztepe-oyuncak-muzesi/

Untitled illustration of Cin Ali Müzesi [Online image]. Ankara Masası. https://www.ankaramasasi.com/haber/713411/mimar-ve-cin-ali-muzesi-kurucusu-nevin-kaygusuz-apaydin-ile-ozel-roportaj

Untitled illustration of Anatolian Civilizations Museums [Online image]. Türkiye Kültür Portalı. https://www.kulturportali.gov.tr/turkiye/ankara/gezilecekyer/anadolu-medenyetler-muzes

Untitled illustration The Metropolitan Museum of Art [Online image]. Huffpost. https://images.huffingtonpost.com/2016-10-20-1476988157-309708-MetMuseum.jpg

Walker, S. (2021, October 26). *Introduction: What are the 7 Art forms?* https://www.contemporaryartissue.com/what-are-the-7-forms-of-art-a-complete-overview/

Akbank Sanat. (2017, December 7). *Mimarlık Seminerleri Dizisi – CER Modern Sanatlar Merkezi* [Video]. Youtube. *https://www.youtube.com/watch?v=huwxEXLiupE*

APPENDICES

A. Appendix A

Figure A.1. Original version of the poster of photographs of outdoor areas at CerModern.

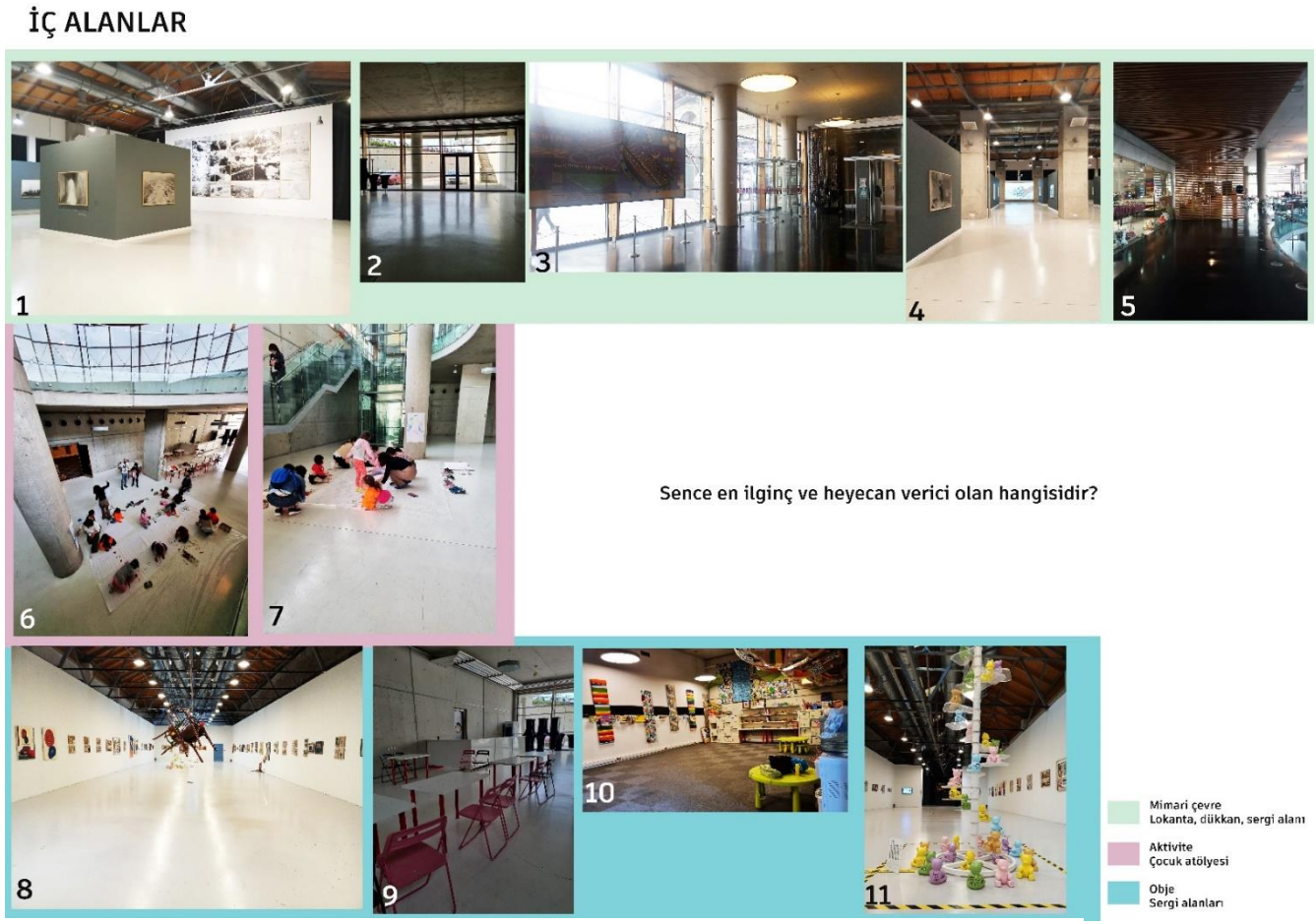


Figure A.2. Original version of the poster of photographs of indoor areas at CerModern.

CERMODERN TEZ ÇALIŞMASI SORULARI - TR - MART 2023	YAŞ: CİNSİYET: SEÇİLEN:

DUYGU-İHTİYAÇ-DUYULAR ÜZERİNDEN SORULAR

(1)Bu müze alanında en çok senin merakını uyandıran/ seni neşelendiren nereler oldu?

(2) Burada seni güvende/konforlu/ait hissettiren neler var?

Nerelerde oyun oynayabiliyorsun? Ya da oynayabileceğini düşünüyorsun? Oralarda neler var?

(3) Orada [gördüğün/duyduğun/temas ettiğin/kokladığın] neler var?

SANAT ÖĞRENİMİ ÜZERİNDEN SORULAR

(1) Bu müze alanında gördüklerinden sonra bir resim yapsan, ne yapmak istersin? (resim, çizim, heykel, baskı, video/film, fotoğraf, grafik, obje, mimari vb.) (Art Area)

(2) Resmin bizim dünyamızın dışında mı bir şeyler olur, çevremizle mi ya da insanlarla mı ilgili olur? (Subject)

(3) Bu müze alanında gördüklerinden sonra resmini daha önce yaptıklarından farklı nasıl yaparsın?

(3.1) İçinden geldiği gibi, farklı kavramlar üzerinden, bu alanlarda gördüğün şeylerin sende uyandırdıkları üzerinden? (Mindset)

(3.2) Gördüğün gibi mi, kendi ifadeni göstererek mi, yorumlayarak mı? (Intention)

(3.3) Gerçekçi mi, soyut mu? (Imagery)

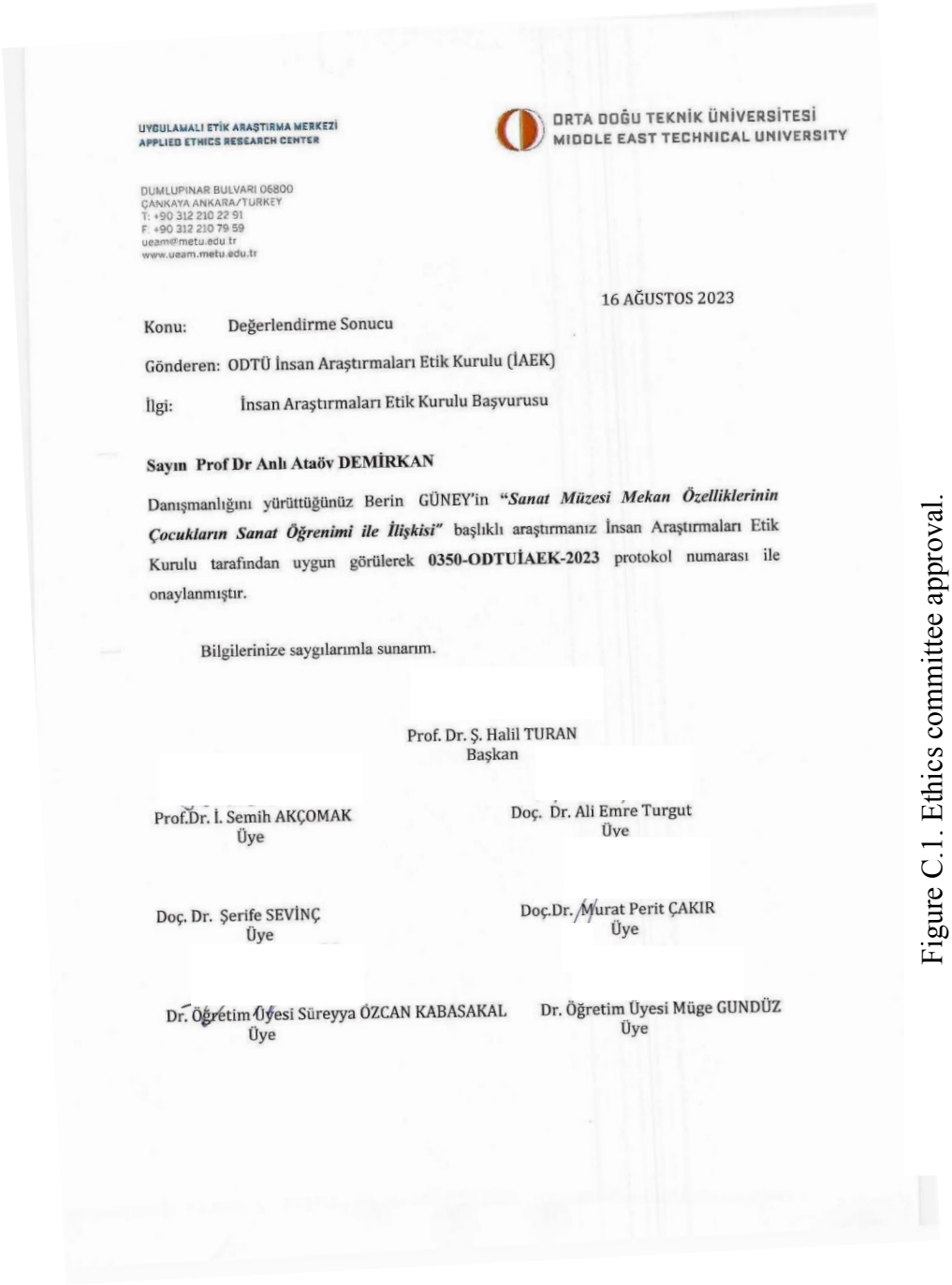
(4) Bu müze alanında gördüklerinden sonra resminde neyi göstermek isterdin? (gerçeği, yeni bir gerçekliği, sentezi) (Approach)

(5) Bu müze alanında gördüklerinden sonra resmini daha önce kullanmadığın hangi yollarla yaparsın? (gördüklerin, teknolojik, imgeleme vb.) (Medium)

(6) Bu müze alanında gördüklerinden sonra resmini yaparken kullandığın parçaları nasıl üretirsin? (değiştirme, ekleme, çıkartma, dönüştürme) (Process)

Figure B.1. Original version of the questions of the survey.

C. Appendix C



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16 AĞUSTOS 2023

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Prof Dr Anlı Ataöv DEMİRKAN

Danışmanlığını yürüttüğünüz Berin GÜNEY'in ***"Sanat Müzesi Mekan Özelliklerinin Çocukların Sanat Öğrenimi ile İlişkisi"*** başlıklı araştırmanız İnsan Araştırmaları Etik Kurulu tarafından uygun görülerek **0350-ODTUİAEK-2023** protokol numarası ile onaylanmıştır.

Bilgilerinize saygılarımla sunarım.

Prof. Dr. Ş. Halil TURAN
Başkan

Prof.Dr. İ. Semih AKÇOMAK
Üye

Doç. Dr. Ali Emre Turgut
Üye

Doç. Dr. Şerife SEVİNÇ
Üye

Doç.Dr. Murat Perit ÇAKIR
Üye

Dr. Öğretim Üyesi Süreyya ÖZCAN KABASAKAL
Üye

Dr. Öğretim Üyesi Müge GUNDÜZ
Üye

Figure C.1. Ethics committee approval.