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## Original Research Article

# In the Quest of a Model to Improve the Concept of Place Attachment Case Study: The University of Art\*

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## Abstract

**Problem statement:** Place attachment is one of the most important dimensions of the relationship between humans and places and the place is the one that has the power to establish connection and bonding between place itself and human being. Although the concept of place attachment and its attributes are rooted in many approaches and theories, the scarcity of a precise definition of place attachment discipline has confused designers in recognizing and using the factors of such a semantic level. By reviewing the respective literature in this research, while defining this meaningful spatial quality, the correlation between place characteristics and the meaning of place attachment - which has been explained in previous studies – has been interpreted and studied in this field. It is because of finding the forms and the interfering factors as well as its measurement tools. Finally, the goal is to find a model for ameliorating this quality in place based on the findings of this research.

**Research objective:** Answering the question “What are the constructive components of place attachment in Art University?”, this research’s purpose is to present a model to explain and ameliorate place attachment quality relying on findings of previous studies, identifying the gap in them and also finding solutions to liberate designers from bewilderment and uncertainty in understanding the concept of place attachment are among the objectives of the research.

**Research method:** This research has used the data-based theory method relying on a qualitative approach.

**Conclusion:** This study attempts to interpret and assess the perception of the students of the University of Arts of place attachment to develop a theory that can fill the theoretical and practical gap in the study of place attachment. It used qualitative research using data-based theory in this direction. This study presents a model in which the three stimuli of background, setting and foreground are considered as components of place attachment in educational spaces. In all the answers received from the participants, whether in the questions related to the personal experience of the person from the location of the University of Arts or in the general questions related to the personal life experience of the person, despite the differences, they all mentioned the three stimuli in which the “background” stimuli are present as an intra-mental connection and the “setting” as reality or the moment of human presence in the place and from the overlap of the two, along with personal wishes and desires at that time the third stimulus, foreground, emerges. In general, it creates an ecosystem in which all components play a role and it is the main factor in the human judgment of place. Although it is possible to study the factors of each of the stimuli separately (as previous researchers have studied place attachment factors this way), in the end and after merging them, it is not possible to break them down into simple sets and distinguish them as individual elements and results in a secret connection which is the basis of the concept of place attachment.

**Keywords:** *Place, Place Attachment, Components of Place Attachment.*

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## Introduction

Understanding the meaning and realizing the beauty of the environment or comprehending it can lead us to place experience. Human beings not only capture their environment in their minds but also care about their emotions within it and feel that they're attached or they belong to the surrounding area to the degree that they recognize themselves with it. On the other hand, human beings' need for emotional, cognitive, operational, and behavioral interactions are among the urgent requirements when in the place. The physical environment and its effect on daily life are among the issues that have caught the attention of many experts in recent years. This issue is extremely important in architecture due to the close connection of people with the built environment and the development of human societies and changes in people's lifestyle and their habitation especially in the twentieth century (Javan Forouzandeh & Motallebi, 2011, 27). A place is always judged by its users and human endeavor to create and achieve acceptable levels of the place quality is the evidence of this claim. One of the essential and consecutive aspects of evaluating a place which is an efficacious component in the quality of a place is the way we attach to it. The 1970s were the turning point for designers' interest in discovering people's connection with the concepts of place. Theoretical literature of the sciences of environmental psychology, philosophy, and literature refers to the concept of place attachment to describe the relationship between people and the environment and to recognize the term 'place'. On the other hand, the growing influence of culture on place preferences, issues related to the social consequences of place etc. resulted in human being's feeling towards different places such as educational places became the focus of many of researches. The importance of dealing with educational spaces on a case-by-case basis, along with the method and content of education, the skeleton of educational space are the important and efficacious factors in the upbringing and growth of learners to the extent

that one of the crucial elements in the development of a successful curriculum is the learning environment and a positive and effective learning environment leads to greater engagement and academic achievement (Khalil & Saar, 2009, 147). Some researchers even believe that a rich learning environment ameliorates teachers' methods of teaching and provides better conditions for learning (Hansen & Childs, 1998, 8). This study questions the components of place attachment in educational spaces. In this way, it can increase the attachment to educational places by providing solutions.

## Review of literature

Educational spaces have always had a salient position in architectural research. Investigating the effective components on the design of educational spaces that have mainly dealt with physical factors and their effects on various educational, psychological, and learning dimensions are among the research fields considered in these spaces (Table 1).

### • Place attachment

In "Loqatname Dehhkoda" [Dehhkoda Dictionary], the word attachment is defined as the state of the manner of the attached one, interest, and belonging (Loqatname Dehhkoda, 1956, s.v. "Delbandi"). Attachment is derived from a Greek concept called Storage (a kind of love between parents and their children). Attachment is a special emotional relationship that requires the exchange of pleasure, care, and comfort. The roots of research in the field of attachment is Freud's theory of love. Another researcher, who is called "The Father of Attachment Theory", Bowlby (1969) has done extensive research on the concept of attachment and described the attachment as follows: "Sustainable psychological connection between two people".

Place attachment depends entirely on the emotional and inner influence of the place on the human being and the perception of the place, and it has two aspects. One aspect depends on physical factors and has a formal physical appearance and visibility, and the other aspect depends on non-physical and perceptual

Table 1. Some researches related to educational spaces. Source: authors.

Researcher	Research title	Research results
Mortazavi (1992)	Faza-ha-ye Amouzeshi az Didgah-e Ravanshenasi-ye Mohit [Educational Facilities from a Psychological Perspective]	1. Classroom benches and how they are arranged 2. An appropriate size of classrooms 3. Creating spaces for students to move and participate
Nasr Esfahani & Sa'edi (2002)	Ta'sir-e avamel-e fiziki-ye kelas bar pishraft-e tahsili-ye daneshamouzan [The effect of physical factors in the classroom on students' academic achievement]	1. Classroom heating and ventilation 2. Classroom organization and arrangement 3. Educational equipment
Lottf Ata (2008)	Effect of environmental factors on behaviors and learning, in educational spaces (especially elementary schools)	1. Proportions of components 2. Scales 3. types of space organization 4. Colors 5. Light 6. Sound 7. Outdoor enclosure
Mardomi & Delshad (2010)	Mohit-e yadgiri-ye en'etafpazir (jahan-e koudak-e tajrobepazir, sistem-e amouzeshi-ye taghyirpazi) [Flexible learning environment (experiential child world, changeable education system)]	1. Reviving communication routes and transforming spaces to areas for learning 2. Extending learning areas from closed spaces to semi-open spaces such as terraces and fully open spaces, such as courtyards 3. Modifiable collective (active) spaces for multipurpose uses (Resting, group learning, etc.) 4. Transparency and the possibility of attending all the activities take place in the collection, albeit visually
Azemati, Parvizi, Karimi Azari, Aghabeigi Kalaki (2016)	Design effective principles in improving students' creativity in teaching spaces, Example case: maidenly high schools in Lahijan	1. Principles of designing optimal educational spaces 2. Using the flexibility of forms 3. Semi-open space 4. Variability of light and color 5. Architectural use of green space 6. Variable furniture: The criterion of light and color variability has the greatest effect in creating motivation and creativity.
Taher Tolou'del & Aminifar (2016)	Environmental variables with emphasis on improving the quality of learning in educational spaces	In this study, the effect of five environmental factors on learning is studied quantitatively in the form of the general variable of school environmental comfort.
Torkman, Jalalian & Dezhdar (2016)	Naghsh-e me'mari va avamel-e kalbadi-ye mohit-e amouzeshi bar tashil-e yadgiri-ye koudakan [The role of architecture and physical factors of educational environment on facilitating children's learning]	Environmental factors that make up the educational space between the six factors: light quality, sound comfort, educational equipment, new classrooms, variety of forms, and flexible furniture, have a positive relationship with children's academic performance. The combination of these factors together provide the conditions for the student to be able to focus on the lesson more easily, on the other hand, it provides better conditions for the teacher so that he can also convey the lesson material to the students better; In this way, it facilitates students' learning.

factors that the person receives through his senses. In other words, place attachment is a quality that depends on perception based on the activity and interactions between man and place in a particular place. In general, the concept of attachment to a place is associated with positive feelings about the place. For instance, the word topophilia by "Yi-Fu Tuan" best illustrates the concept of place attachment. In another article, Tuan named Geopiety as a concept that covers a wide range of emotional connections between the individual and the environment. In

other definitions of place attachment, phrases such as emotional bond and positive emotional bond between a person and a particular environment or place are mentioned (cited in Alexander 2008, 8). There are several interpretations on the relationship between sense of place and place attachment, which have various subcategories. The results of several years of research on attachment to a place are presented in Table 2.

The concept of place attachment has been considered in many semantic layers by experts with different

Table 2. The connection between the sense of place and place attachment. Source: authors Based on Ghaleynoyi, Zamani & Peymanfar, 2017, 88.

	Interpretation of Semantic Connection	Explanation		Subcategories
Connection Between Sense of Place and Place Attachment	Place Attachment Below the General Concept of Sense of Place	It only reflects the emotional dimension of human-place relationships, not its generality.		1. Spatial Identity 2. Place Attachment 3. Functional Attachment (Place dependence)
	Place Attachment at a Higher Level Than Sense of Place	Considered as a container of concepts and the main indicator of the quality of the human-place relationship	2. Place Attachment	1. Belonging to a Place Components in Pre-2010 Research Place dependence      Spatial Identity This two-level model is inattentive to important ties with the social and natural environment and it's more about the personal aspect of place attachment. Components in Post-2010 Research Spatial Identity    Place Dependence    Spatial Interests    Social Connections with Place Researchers interested in social attachments found that the geographical and social context of spatial links needs more attention. 3. Commitment to Place

intellectual backgrounds. These semantic layers are debatable in the sciences of sociology, human geography, ontology, anthropology, environmental psychology, and in the form of the phenomenological doctrine.

- Place attachment in environmental psychology: People need emotional and spiritual connection with their places to have a better life. They fulfill their needs through emotional relationships and identification with where they live and spatial analysis can be experienced as common cultural symbols among individuals from the cultural nature of place attachment. In fact, people relate places to cultural characteristics. In such a way that space can be a stimulus for human experience and a reminder of cultural concepts and meanings (Falahat, 2006).

Place attachment in phenomenology: Over time, the person adapts himself to the place and will have convergence with it (Norberg-Schulz, 1976). Attachment to the place means a strong connection and an influential factor between the people and the place including its components. This bond is positive and expands the depth of the person's

relationship with the environment and it deploys over time. According to Cuthbert, place attachment is connecting with a place by understanding the symbols and daily activities and continuity and continuous connection with the spirit of the place (Cuthbert, 2006).

Place Attachment usually occurs after people have a long-term or strong experience with a place, and it is in this process that the place finds meaning (Tuan, 1974). In this regard, Tuan refers to the root factor in place, which means to merge and become one with place. Instead of the sense of place, Tuan introduces the term place-friendliness and considers it as a loving and effective connection in people and places or camps and believes that all places have a soul or personality, but having a sense of place requires a person in space (ibid.).

Although place attachment is a mental concept and implies a sensory and internal relationship, various studies have been conducted to measure the dimensions and the degree of attachment to the place that have tried to quantify this concept. Studies conducted by researchers, based on the

process and the degree of place attachment and the factors influencing its formation, indicate various dimensions in the concept of attachment to the place. Schreyer, Jacob & White (1981, 296) have classified a person’s attachment to place into two dimensions: emotional and functional and Giuliani & Feldman (1993, 270) have classified it into different emotional, cognitive, and behavioral dimensions. A person becomes attached to a subject when, on the one hand, they can meet their needs and expectations and on the other hand, evaluate it in harmony with their self-made mental patterns. The ability of the place to meet the needs of the individual or the opportunities that the place provides to meet their needs and goals (Stokols & Shumaker, 1981), is the second view toward the subject of place attachment which refers to the existence or participation of a person in certain activities in the place (Bricker & Kerstetter, 2000; Hammitt, Backlund & Bixler, 2004) and based on this view, attachment to place includes emotional, behavioral and cognitive dimensions. Fig. 1 shows the results of studies conducted in the field of dimensions of place attachment.

By analyzing the connection between the individual and the place, humanities researchers have achieved results in terms of the factors influencing the formation of place attachment. With a comprehensive look at studies conducted in various

sciences, the results are categorized below the different dimensions of place attachment in Table 3.

### Theoretical foundations

In recent decades, with the expansion of the theoretical field, new theoretical paradigms from other fields, including philosophy and literature, have entered architecture as phenomenological approaches. Interdisciplinary perspectives have been influential in the process of perceiving and evaluating meanings, especially sensory meanings of place. Undoubtedly, studying and analyzing these opinions will be useful for understanding the meaning of place, strengthening the meaning of place attachment, and enhancing its ability. The main emphasis of these views is on the sense of poetics, the sense of imagination, and semantic concepts in understanding the meaning of place.

According to the above definitions, the classification of different factors, and the review of studies that have examined the factors of place attachment, it can be perceived that the aspects of place attachment, despite being expressed in a scattered and separate way, are considered to be two general areas. The first area focuses on internal factors (rational) that stem from mental perceptions (Neisser, 1976, 110). This area appears in the form of people’s perceived backgrounds and includes their mental perceptions.

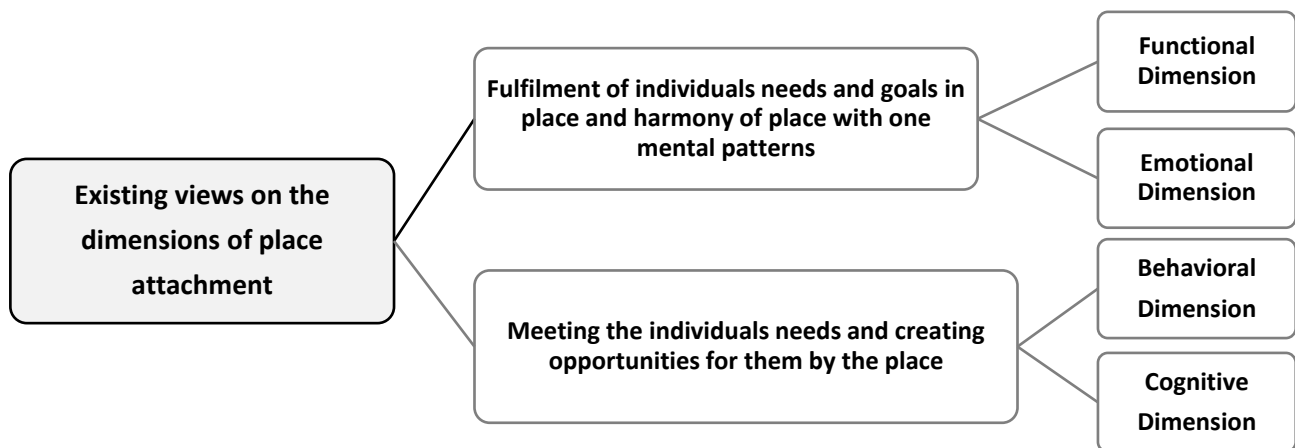


Fig. 1. Existing views on the dimensions of place attachment. Source: authors.

Table 3. Dimensions and factors of place attachment. Source: authors.

Dimension	The results of studies	Researcher
Individual	Place attachment and gender (Women do not have higher levels of place attachment than men; However, the length of stay has a positive effect on women's attachment.)	Rollero & Piccolo (2010) Bonaiuto, Aiello, Perugini, Bonnes & Ercolani (1999) Cuba & Hummon (1993) Childress & Gillis (1977)
	Age as a positive factor of place attachment	Lewicka (2009) Hong, Ping & Pong (2005) Pretty, Chipuer & Bramston (2003) Lovejoy, Handy & Mokhtarian (2010)
	Less attachment among singles and single parents compared to married with children	Altman & Low (1992) Campbell & Lee (1992)
	Level of education as a positive factor of place attachment	Mesch & Manor (1998)
	Length of stay as a positive factor of place attachment	Knez (2005)
	Housing ownership as a direct positive factor of place attachment	Lewicka (2009) Brown, Perkins & Brown (2003)
	Income class as a negative factor of place attachment	Cohen & Shinar (1985) Sanoff (1970)
	The inverse relationship between the level of education and place attachment	Hur & Morrow jones (2008)
	The positive relationship between walking rate and place attachment	Lund (2002)
	Group	The effect of religion on place attachment
The effect of culture on place attachment		Triandis (1994) Lawrence (1992)
Physical	The type of housing is one of the factors influencing the place. (Attachment to traditional and historical environments is more than attachment to modern ones.)	Lewicka (2009) Nasar (1998)
	The physical properties (density and proximity) of a place affect the place attachment.	Fried & Gleicher (2000)
	The size of the building as a negative factor of place attachment	Lewicka (2009)
Social	The beauty of the building's appearance and the existence of green space as a positive factor of place attachment	Bonaiuto et al. (1999)
	Social relationships, getting to know the residents are positive factors in place attachment	Riger & Lavrakas (1981)
	The social realm and the social symbol are the social factors influencing the amelioration of place attachment	Scannell & Gifford (2010)
Emotional	Being present in the process of creating a place is a positive factor of place attachment	Rivlin (1987)
	Interpersonal interactions & social realms are positive factors in place attachment	Fried & Gleicher (2000)
	The positive emotional attachment between person and place (living environment)	Shumaker & Taylor (1983) Stedman (2003) Rubinstein & Parmelee (1992) Altman & Low (1992) Twigger-Ross & Uzzell (1996) Shumaker & Taylor (1983)
Behavior	Attachment to a subject based on one's behavioral structures	Shamai (1991) Brown & Perkins (1992) Vaske & Kobrin (2001) Bamberg & Moser (2007)
Meaning	Rooted in one's connection with the meaning of the environment	Gifford (2002) Milligan (1998) Cross (2001) Relph (1976)
Cognition	The way of perceiving and individual perception about the place affects it	Fridgen (1987) Riley (1992) Gifford (2002) Stedman (2003) Raymond, Brown & Weber (2010) Knez (2005)



Backgrounds depend on the structure of the mind and are the product storing knowledge and mental savings. These abstract and general perceptions have a bubble-shaped structure in mind and are completely dependent on the individual (Downs & Stea, 1973). Numerous studies on these factors in various sciences indicate the high importance of backgrounds. The second area refers to external factors that are originated from sensory perceptions. These factors, which are currently in the setting and are rooted in human presence, are a platform for transmitting place information and its structure to the human sensory organs (Gibson, 1976). The physical characteristics of a place or factors that depend on material characteristics such as density, proximity, size, color, volume, proportions, etc. are in the category of sensory perceptions and setting. So the question is: how do people judge a place and what is their criterion for evaluating? Therefore, the questions of how people judge a place and what is their criterion for evaluating inevitably draw the attention to the fact that the evaluation of the place of the product is an ecosystem process in which several factors are involved. After being in place and facing the setting, the person receives information through sensory perceptions and then processes them through mental perceptions. Judgment is the product of evaluating the location and the impact of background on the setting. In other words, the evaluation of the place is the same as the person's processing of the background stimuli and the setting related to the place that leads to the creation of the foreground.

A) The first stimulus or "background" speaks of the intra-mental connection before the present moment, faces that are processed in the mind and create mental images that human beings use to understand the environment. Edward C. Tolman was the first to use the term cognitive map. He used the term to compare human behavior with others in the environment (Kitchin, 1994, 2). In the most general form of definition, the cognitive map is a mental structure that man uses to understand the

environment (Kaplan, 1973). Tversky states that the cognitive map is a set of mental factors that guide behavior (Tversky, 1992). Blaut & Stea (1974, 227) introduce the cognitive map as a structure that enables one to perceive the environment, which is not perceptible at the beginning due to its large size. In this process, the person creates in his mind a matrix of past environmental experiences and new experiences that help him understand the environment. Wood and Beck (1990) state that the cognitive map is not independent of meaning, role, function, need, and purpose. From this distinction, it can be concluded that the background or cognitive maps also include knowledge about the place, which comprises of a set of images, information, and attributes related to an environment (Spencer & Blades, 1986, 240). According to Spencer, Blades & Morsley (1989) cognitive maps are not a separate entity from the background. These images are formed during the purposeful activities of children's daily lives and are coded based on valuable friends, memories, inspirations, etc. . Siegel and Cousins (1985) consider cognitive maps to be bubble and abstract hypotheses that we create in our minds and use them in life. In this definition, cognitive maps also include imagination. Piaget and Inhelder (1956) used *schema* for cognitive maps. In fact, *schema* is a concept that Piaget refers to as accommodation. Schema is something that is shaped by the nature of what has been experienced or done by the perceiver in the past. According to Neisser (1976, 111), cognitive maps have an active and exploring existence. That's why he uses the term *orienting Schemata* instead of the word cognitive map. Just as I have a schema of this object containing my desktop light information, and this allows me to search for this object in the future, I also have a cognitive map of my office that contains all the information about it that allows me to move around in that room. In this regard, Tuan (1975) mentions personal characteristics, personality traits, people's abilities, perceptual backgrounds, and environmental influences. He also mentions an

imaginary world people are taken out of their habit and are encouraged to move in space and discover it. For instance, places can be mentioned that people have not been to but make cognitive maps through a friend's novels, conversations, or descriptions. This illustration makes spatial behavior possible even in unfamiliar environments. In this regard, Jung also spoke of the collective unconscious. Jung divides what we call the unconscious into three parts:

- The realm of the available unconscious;
- The unconscious realm that is accessible by thinking;
- Accessible unconscious core.

Therefore, it can be said that background is a pattern of behavior that, as a stimulus, motivates the person to receive more information from the environment and gives a sense of exploration. Schema also depends on what the person is experiencing. The present experience changes the individual's schema. In other words, the backgrounds are dynamic and are constantly evolving. In general, it can be said that each person's ability to perceive and behave in place is completely specific to that person because there is no other person with the same position in his environment.

**B)** The second stimulus of this structure is the setting that speaks of the reality or the moment of human presence in the place where it is possible to gather things at that moment. The moment of presence in the place is a mixture of mentality and objectivity and is different from the background stimulus since it is rooted in the presence of the factor of human perception and feeling. In other words, in the process of perception as a document, this space is the platform for transmitting place information to the sensory organs and it connects its structure to the individual's sensory perceptions. According to the classical theory of perception, after receiving information from the environment, encoding, storing, processing, and decoding operations are performed on the received information. This relationship between the background and the setting's stimuli is a two-way connection; in this way, the person first receives information from the

place and processes it in his mental space. Then his assessment of the information receives, which is very dependent on his mental structure, leads to behaving in place. In this connection, Merleau-Ponty speaks of an intermediate or contextual reality in which it is generally possible to collect things. Beyond the physicality of architectural objects and the functional aspects of their planning content, presence in the moment of experience is not just a place for events and activities, but something incongruous that emerges from the gradual emergence of overlapping materials and details. The setting speaks of the experience of the moment of purity in an objective and mental place. At the same time that the perceiver fits into the place, the place fits in him and causes confusion and monotheism of the physical and mental inside. Because every place, in addition to being a source of memory, also strengthens emotions through its authority and glory. In this connection, Juhani Pallasmaa speaks of the architecture of the senses, silence, time, loneliness, the space of smell, the form of touch, and in fact the taste of architecture, which is the combination of objectivity and mentality in the moment of presence. Steven Hall talks about immediate sensory perceptions such as time, light, shadow, texture, matter, and detail. According to Brentano, physical phenomena involve our external perception, while mental phenomena evoke our internal perception. Arousing both internal and external aspects is the moment of presence in the setting.

**C)** The third stimulus or foreground is the reality that emerges from the gradual emergence of the background and setting, along with the person's wishes and requests at that time, in which a complete perception (uniformity) is formed. A concept that cannot be easily broken down into geometry, activities, and emotions. That moment, like Paul Cézanne's paintings, leads to a visualization of how we are touched by the world (Merleau-Ponty, 1964, 19). In fact, at this stage, after being in the setting and receiving information through the senses, information about the characteristics of the place is



sent to the levels of the brain’s processor. At these levels, after matching the information with what is already stored in the person’s mind as memories and background experiences, as well as combining it with his wishes and desires, the person’s purest emotions are aroused and the person’s evaluation and judgment in the form of The background arises. The end of the causality paradigm leads to the statement that in the process of place attachment, we confront a complex ecosystem that is the result of stimuli and includes how a person judges a place. This cycle continues during the person’s presence in that place, and the result of his judgment and evaluation is effective on the dimension of place attachment. Also, this judgment will have a significant effect on the architectural design process and will have a different attitude towards the composition of attachment to the place and its understanding (Fig. 2).

**Research method**

This research used a qualitative approach to discover, explain and characterize the concept of place attachment to codify the theoretical framework and the will of explanatory theory. This approach examines phenomena in their integrity and entirety,

in their natural environment, and in relation to a set of contextual elements. This means that qualitative researchers study objects in their natural positions and try to conceptualize or interpret phenomena according to the meanings that people give them (Gall, Borg & Gall, 2014, 60). The method used in this research is Grounded Theory (GT). This method is considered a modernist approach by various experts today (Farasatkah, 2017, 19). In this method, instead of testing existing theories, the researcher formulates a theory based on data. It allows the regular recognition of views and meanings from the perspective of individuals in a particular situation, so the data-based theory is twinned with exuberance and diversity. In the field theory method, the research has got a general subject and recognizing the hidden aspects and functions of the studied subject followed and specified during the research process. Questions asked in the data-based theory are generally open-ended and generic. Grounded theory is an induction-based method that builds theory based on collected data by carefully accumulating and analyzing qualitative data. Data collection sources are divided into two categories in the data-based theory method; Primary sources include interviews, participatory and non-participatory observation, recording interviews of the area of study and diary; and secondary sources that include the individual, existing literature, and their comparisons. In the data collection stage, sampling work is done theoretically and purposefully to achieve theoretical saturation. The number of people interviewed, or in other words, the sample size depends on the questions asked. Thus, whenever a researcher concludes that the answers given are similar to interviews with au courant individuals that lead to duplication of answers or interviews and no new data in them, the number of interviews is considered sufficient and refuses to conduct an interview. Data collection, regularizing and data analysis are interrelated and performed simultaneously in this method. This is the main process of building a theory. The method of data analysis is done through coding

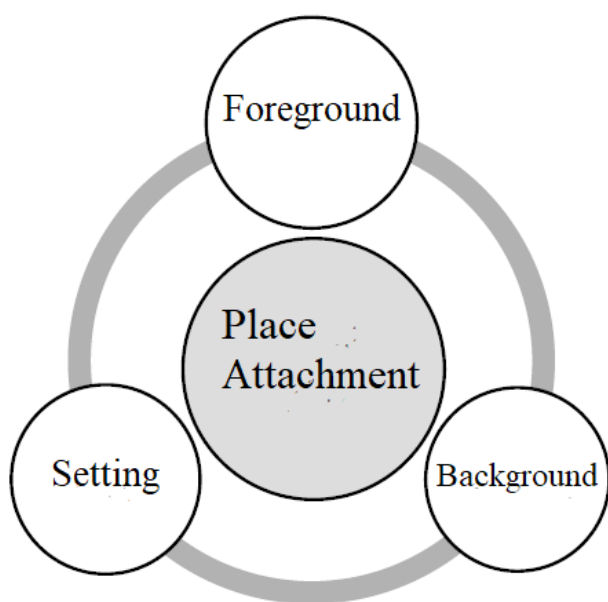


Fig. 2. Place attachment model. Source: authors.

and refers to a process of analysis through which the concepts are identified and their dimensions and characteristics are discovered in the data. Basically, the data-based theory is formed based on recognizing and identifying the topics and concepts in the text and text coding. Here, coding means decoding and interpreting data and includes naming concepts and explaining and discussing them in more detail inductively (Strauss & Corbin, 2011). Types of coding include open, axial, and selective coding. The validity of this research is based on achieving reliability and generalizability criteria (Equivalent to authenticity and validity in quantitative research), which is done by comparing with the existing theoretical framework. Comparing it with conflicting frameworks of internal validity and similar frameworks of external validity adds to a creation of a territory for the generalization of research findings. The reliability of the research is assessed by bringing texts from the interviews, implementing the complete process of the data-based theory method, and describing the actions.

According to the conditions of the present study and to understand the context of the interview, an interview guide in the form of a pilot project was needed. Therefore, the interview pre-test with five questions was performed before the main ones. In this stage, one student from different fields was selected by snowball method and an in-depth interview with these people provided the ground for designing open questions for the semi-structured interview in the next stage. Findings from the pilot project interviews showed that the questions asked should be explained in more detail to the participants; therefore, following the research, the interview

questions increased to six items. The interviews were conducted in the Art University in a semi-structured manner to achieve theoretical saturation of the selected community with 30 students studying in different fields (Table 4). The gender ratio was considered in the selection of participants.

The sampling method in this study is purposeful, and the samples were selected by snowball method to collect data and in-person interviews were conducted. Based on the initial in-depth interview in the test guide, the semi-structured interview questions were organized into four main categories including general data on gender, age, the field of study, and degree, as follows.

Question 1: What university quality is important and distinctive for you?

Question 2: How do you feel about the university now based on previous experience and information?

Question 3: How do you see your relationship with the university?

Question 4: What kind of places make you feel good and you can establish a good relationship with them?

Question 5: What places are important to you and you find them comfortable?

Question 6: What places do you fall in love with?

The questions can be divided into two main categories, including questions about the Art University and questions about the place. Each interview lasted between 10 to 30 minutes due to the pauses and short breaks between questions. While taking notes from the interview, the researcher recorded the conversations digitally to ensure that nothing was left out. The notes were an attempt to describe the hidden aspects of the interviews and to record points related to the reconstruction of the

Table 4. Demographic description of sample. Source: authors.

	Gender of students		Degrees		Field of study			Student semesters			
	Female	Male	Bachelor	Masters	Architecture	Urban Planning	Painting	Restoration	Between 1 to 4	Between 4 to 8	Above 8
Number	17	13	25	5	12	11	2	5	12	13	5
Total participants: 30											

interviews. It is necessary to explain that according to the ethical standards, recording and taking notes were done with the permission of the participants, and even mentioning the names in the research was done accordingly. The data related to each question were implemented separately after collecting the data. Categorizing and sorting the data was done according to the grounded theory method and according to the methodology introduced in the above section. At this stage, the available data were segregated and each was sorted separately according to the research question. The recorded interviews were implemented and the data related to each question were separated. After reviewing the interview data, key points from similar researches from the documentation were added to each section. After preparing the necessary infrastructure, the process of data analysis and data coding was done with open, axial, and selective coding steps.

### Research findings

According to the data-based research method, the findings of the interviews were examined and the core categories were identified by coding these data in this section. For this purpose, the collected textual data and interviews were examined line by line to extract the basic concepts of coding,

so that the concepts obtained for each question were categorized in the form of a series of central topics. In the axial coding stage, the axial topics are related to each other and the core topic of each question is extracted, then the base data model based on the topics and the core topic were explained in three dimensions: conditional, interactive, and consequential. Finally, the obtained core topics were known as the factors of perception of place attachment in educational spaces, which in terms of conditions, interactions and consequences formed the final model of this study. Table 5 presents the concepts, themes, and core themes separately for each of the components that have been questioned based on the components of Place attachment in the Art University. These concepts and topics were shared with some of the participants to confirm the validity of these findings by reviewing them.

- **Feeling as a university member (university admission)**

This theme was emerged by asking questions about the quality of the university. In this question, a wide range of concepts were mentioned such as dissatisfaction with the lack of space, intimacy between students and a pleasant atmosphere, positive energy due to university antiquity, intimacy, beauty, wide sense due to the nature of the university, sense of freedom in the university

Table 5. Concepts, themes, and core themes extracted by six questions. Source: authors.

No	The study area	Number of emerged concepts	Number of emerged themes	Core topics
1	University quality forms	29	6	The feeling of being a member of the university (University Admission)
2	The effect of people’s previous experiences and information on their feelings towards the university	11	3	University as home
3	People’s relationship with the university	10	4	University in the center of life
4	Create a pleasant feeling in the place and establish a relationship with the place	16	6	Understanding the semantic of place
5	Important places from the perspective of people and a sense of comfort in the place	12	4	Cognitive interaction with place
6	Places that make you love them	13	6	A place to fall in love
	Conclusion		29	6

environment, existence of opportunities for activity and education, architectural elements of the university, sense of special university environment, existence of hierarchy in entering the university space, visual elements of university environment, sense of calm, adaptation of space to function, dissatisfaction with disproportionate proximity to university function, attractiveness, dissatisfaction with gradual reconstruction, dissatisfaction with not communicating with students in various fields of study, friendly environment, sense of comfort, large educational space, age of university campus, the focus of a field of study in a building, the positive energy of the educational environment, the sense of security, good social relations, the existence of educational opportunities and experiences, valuable neighborhoods of the university. These concepts result in the conditional themes of physical quality of the university, the ability of the university and the educational quality of the university, and as a result, cause the interactive topic of quality from the perspective of individual feelings and cause consequential topics of affection with the university and nostalgia.

*“When we arrive in the place we enter a garden and it gives me a very good feeling that I do not feel that it’s an enclosed area. I feel that it is open and I go into a garden in which we have the same mantle and freedom that no one will tell me that I mustn’t do this. The freedom in choosing clothes gives me a good feeling and the important thing is that there is no one to catch me”.*

Based on the summary of the topics, it can be said that the category of *feeling as a university member* can cover all the expressions of the participants and have an analytical aspect. Students consider the university environment as a quality and distinctive environment and describe these characteristics as a result of various historical, physical, social, emotional, and educational factors. In general, it can be said that university students consider themselves as parts of the place they belong to.

#### • **University as a home**

This theme emerged following the question of the effect of previous experiences and information of individuals on their feelings towards the university. In this question, concepts such as a sense of satisfaction with personal communication, sense of satisfaction with the scientific dimension, sense of satisfaction with the general atmosphere of the university, sense of satisfaction with the university skeleton, sense of satisfaction with university entertainment, sense of satisfaction with the university as home, sense of satisfaction with the feeling of belonging have been mentioned. In this question, most of the participants considered being at the university as being at home and mentioned the university space as their second home. Hence, the conditional theme of *satisfaction with the integrity of the university* resulted in *the interactive theme of belonging* and resulted in *the theme of university as a second home*.

*“University looks like a life that has everything with it, fun and all experiences together, and it is like a second home for us”.*

According to this, it can be said that the theme of *University as a home* can cover all the wording of the participants. In the explanations given by the participating students in this regard, and with reference to various emotional aspects they mentioned, we can refer to how they perceive the current living situation in the university based on their previous beliefs, desires, and knowledge of the place.

#### • **University in the center of life**

This theme emerged following the question of people’s relationship with the university. In this question, concepts such as good relationship due to social relations, good relationship limited to education, good and wide relationship, good relationship due to nature, good relationship due to age of buildings, good relationship based on individual tastes, a good relationship with more knowledge were presented. These concepts create conditional topics of the nature and antiquity of the university buildings, causing the ability of the

university, the result of which will be a place for self-expression.

*“Our university has a combination of Iranian architecture. Its buildings are made of bricks and they have a great effect on people. Because our university is held as a studio, it is full of windows and it’s sunny. Because of our field and the environment in the university, people get to know each other and communicate better. For example, we are all friends both with seniors and our classmates”.*

Therefore, it can be argued that the *university in the center of life* is a theme that can cover all the expressions of the participants and have an analytical aspect. The explanations given by the participating students in this regard indicate the high levels of their relationship with the university. Due to personal reasons or physical and historical characteristics, the students consider their university to be a different place from other places.

#### • **Understanding the semantic aspect of place**

This theme was created following the question of creating a pleasant feeling in the place and establishing a relationship with the place. In this question, concepts such as creating a pleasant feeling in the place and establishing a relationship with the place, memorable place, fun place, historical place, old place due to sweet childhood memories, old place due to good family relations, enclosed place, a place with natural landscapes, crowded place, Small place, simple place, familiar place, are accepted. Based on these concepts, the conditional themes of security, nature, and legibility of place have caused the interactive topics of nostalgia and ease of perceiving the place and have led to the topic of a sense of belonging.

*“I describe it with color. I think it is carbon blue because it can be soothing and sometimes it can be disgusting”.*

Based on this, it can be said that the theme of *understanding the semantic aspect of place* can cover all the expressions of the participants and have an analytical aspect. To study places that evoke participants’ satisfaction, we come across answers

related to cultural and physical factors, nostalgia, as well as nature and perception. In the answers provided by the participants in this regard, we can mention the concepts of familiarity, comfort, simplicity, reminiscence, family relationships, etc., which have played a role in associating the pleasant feelings of people.

#### • **Cognitive interaction with a place**

This theme was created following the question of important places from the perspective of people and a sense of comfort in the place. A variety of concepts were introduced by the participants regarding the characteristics of enjoyable places to spend time. These concepts include: a memorable place, a friendly place, a family place, a place with a sense of intimacy, continuity of presence, connection with nature, place with sweet memories, place next door, wide place, a place with positive energy, a place with a wide view. These concepts give rise to the conditional theme of environmental factors, and the interactive theme of nostalgia, and the camp of social relations. The sense of belonging to the place is the result.

*“The Bagh-E-Melli is a very informative environment, which means that you can learn both architecture and behaviorism from here and also you can learn from nature. For example, one of the things I learned from nature here is that when we go through the entrance of Bagh-E-Melli and we want to enter the university, there are two rows of sycamore trees. All birds are nested in the left row which means that you do not see any of them in the right row. Because the left row is the west direction and when the sun rises, the first rays of light fall on the sycamore trees on the left, and it is very interesting”.*

Based on the explanations provided, it can be said that the theme of *cognitive interaction with a place* can cover all the expressions of the participants and have an analytical aspect. In the explanations given by the participating students in this regard, we can often refer to a few key places, such as home, school,



university, and park, which they consider very important and crucial and find them comfortable.

#### • A place to fall in love

The concepts presented about the characteristics of the places that make the participants fall in love with were as follows:

Fun place, quiet place, sense of vitality, connection with the five senses, quiet place, religious place, connection with nature, secluded simple place, historical place, large and crowded place, public place, dynamic place, relaxing place. Thus, the conditional topics of nature and antiquity have given rise to the interactive themes of the mystery of the place, concentration and selfishness, and dynamic place, and have given rise to the theme of a sense of vitality.

*“You can fall in love with the city, with the sense of the culture of the people, or those who travel and the good feeling the place gives us. Sense of nature and sense of life, those that have the sense of vitality are among good places. One feels that she/he can live there and they have the feeling of belonging to it”.*

In this way, it can be claimed that a place to fall in love is a theme that can cover all the expressions of the participants. In the answers provided by the participants, we can point to special characteristics such as emotional and environmental characteristics of places that cause the person to connect to the place, and desire and longing for that place are created in the person.

## Discussion

As mentioned in the previous sections, place attachment was the result of creating a unity between the two stimuli of the background and the setting, and led to the creation of an individual perspective of the place called the foreground. In other words, the overlap of the two aspects of the background and the setting, the third aspect or the foreground was created, and based on this; a model of place attachment was presented. The first research question asked about the important and distinctive quality of the university from the students ‘point of view and

related to the students’ personal experience of the location of the University of Arts. Since the question was raised to achieve the factor of the university that was closer to the aspirations of the participants, this question was related to the foreground stimulus. The analysis of the answers from the participants in this question showed significant results. Some participants addressed the university’s social issues such as student relations. These types of concepts were categorized in the topic of familiarity with the university and all referred to background factors. The concepts mentioned in the topics of physical quality and place capability were also mentioned under the underlying factors. Some students expressed their views by referring to the university’s archetypes in the theme of nostalgia. This theme was known under background factors. Some expressed their wishes and desires for the place based on individual feelings, which were categorized as individual feelings and the quality of university education. These themes also refer directly to the foreground (Table 6). Therefore, it can be said that the question posed by the foreground structure by the researcher resulted in the participants receiving answers to the following three stimuli: setting, background, and foreground.

The second research question examines students ‘feelings towards the university based on their past experiences and therefore relates to students’ personal experience of the location of the University of Arts. This question is in line with achieving the person’s feelings based on his information from the university and therefore is related to the background stimulus. Analysis of the answers received to this question reveals a wide range of knowledge of place attachment. Some participants expressed their personal satisfaction with the atmosphere of the place and its physical and environmental conditions. These concepts were categorized in the theme of the integrity of the university and were placed under the underlying factors. Some participants, by expressing their desire and belonging to the place, implicitly pointed to the foreground factors, and

Table 6. Adaptation of the themes of the first question to the dimensions and motivation of place attachment. Source: authors.

Topics from the first question	Dimension of place attachment	Stimulus type	Researchers
Familiarity with the university	Social	Background	Riger & Iavrakas (1981) Fried & Gleicher (2000)
Quality from the perspective of individual emotions	Emotional-cognitive	Background Foreground	Riley (1992) Shumaker (1992) Altman & Low (1992) Tigger-Ross & Uzzell (1996) Stedman (2003) Knez (2005)
The physical quality of the university	Physical	Setting	Fried & Gleicher (2000) Lewicka (2009) Bonaiuto et al. (1999)
University capability			Altman & Low (1992) Williams & Vaske (2003)
University educational quality	Semantic	Foreground	Milligan (1998) Cross (2001) Relph (1976) Scannell & Gifford (2010)
Nostalgia	Emotional-behavioral	Background	Shumaker (1992) Altman & Low (1992) Brown & Perkins (1992)

some of them, with general examples, made the place similar to their house or have tried to replicate it. These concepts were placed in the category of the university as a second home, and due to the reference to archetypes and individual feelings about the place, they were mentioned under the background factors. Therefore, it can be said that the question posed based on the background structure by the researcher resulted in the answers received by the participants under the three stimuli of setting, background, and foreground (Table 7).

The third research question asked about the students' relationship with the university. This question, like the previous two questions, is related to the students' personal experience of the place of the University of Arts. Since this question is designed to investigate the factors that create a person's relationship with the place, it is related to the context stimulus. The analysis of the answers related to this question reveals various dimensions of the characteristics of the place. Some participants considered the individual tastes and social relations of the place, which were categorized in the topic of place to express themselves, which were under the

background factors. Some of them paid attention to the physical characteristics of the place, including historical buildings and its green space. These concepts were mainly related to the topics of the antiquity of buildings and the nature of the university and were the following underlying factors. Some concepts were in the field of individual desires and aspirations and were included in the topic of university capability that reflected the background factors. Therefore, it can be said that the question posed based on the contextual structure by the researcher receive answers to the following three stimuli of setting, background, and foreground from the participants (Table 8).

The fourth research question asks places that students feel comfortable with and can relate to. This is a general question and does not refer to a specific place. Based on the data of this study, the fourth question is the first general question and includes all aspects of the dimensions of place attachment and is designed to understand the views of participants about the importance of each of the three stimuli in the research model. The analysis of the answers received to the question confirms the importance

Table 7. Adaptation of the topics of the second question with the dimensions and motivation of place attachment. Source: authors.

Themes of the second question	Dimensions of place attachment	Stimulus type	Researchers
Sense of satisfaction with the integrity of the university	Social	Background	Riger & lavrakas (1981) Fried & Gleicher (2000)
	Physical	Setting	Fried & Gleicher (2000) Lewicka (2009) Bonaiuto et al. (1999) Altman & Low (1992) Williams & Vaske (1992)
University as a second home	Emotional	Background	Shumaker & Taylor (1983) Stedman (2003)
	Cognitive	Foreground	Riley (1992) Scannell & Gifford (2010)
Fixation	Semantic	Foreground	Milligan (1998) Cross (2001) Relph (1976) Scannell & Gifford (2010)

Table 8. Adaptation of the themes of the third question to the dimensions and motivation of place attachment. Source: authors.

Themes of the third question	Dimensions of place attachment	Stimulus type	Researchers
A place to express yourself	Individual	Background	Rollero & Piccolo (2010) Lewicka (2009) Hong et al. (2005) Brown et al. (2003)
	Social	Background	Riger & lavrakas (1981) Fried & Gleicher (2000)
Nature	Physical	Setting	Fried & Gleicher (2000)
Antiquity of the university buildings			Lewicka (2009)
University capability			Bonaiuto et al. (1999) Altman & Low (1992) Williams & Vaske (1992)
University capability	Semantic	Foreground	Milligan (1998) Cross (2001) Relph (1976) Scannell & Gifford (2010)

of all the stimuli mentioned in the previous three questions and the participants have considered all three stimuli. Some of them have mentioned only one and some of them have mentioned a few cases in phrases. Some have dealt with the dominance of place and its physical properties, including dynamics and dimensions. These concepts have been grouped into themes with the titles of place readability, vitality, dynamism, and nature, and refer to underlying factors. Some of them have expressed phrases that include concepts under the background factors such as nostalgia. Some have also expressed

their wants and needs that are related to foreground factors. Thus, it can be acknowledged that the participants' responses included three stimuli: setting, background, and foreground (Table 9).

The fifth research question asks places that are important to students and where they feel comfortable. This question is also general and was asked without considering a specific place. Based on the data of this research, the fifth question covers all aspects of the dimensions of place attachment; and is mentioned in the research model to understand the participants' opinions about the importance of each

Table 9. Adaptation of the themes of the fourth question to the dimensions and motivation of place attachment. Source: authors.

Themes of the fourth question	Dimension of place attachment	Stimulus type	Researchers
Safety	Behavioral	Background	Shamai (1991) Brown & Perkins (1992) Vaske & Kobrin (2001)
Nostalgia	Emotional		Shumaker (1992) Stedman (2003)
Sense of belonging	Cognitive	Foreground	Riley (1992) Scannell & Gifford (2010)
Nature	Physical	Setting	Fried & Gleicher (2000) Lewicka (2009)
Legibility of place			Bonaiuto et al. (1999) Altman & Low (1992)
Place vitality and dynamism			Williams & Vaske (1992)

of the three stimuli. The categories confirmed the receipt of all three stimuli in the responses received, and the participants considered all three. Some of them mentioned only one and some of them a few cases in phrases. Some dealt with nature and spatial characteristics. These concepts were grouped in the topic of environmental factors and referred to the underlying factors. Some used phrases referring to the past and social relations that included the following concepts of background factors such as nostalgia and the camp of social relations. Some answers were related to the internal desires of the

respondents, which were related to foreground factors. Thus, it can be acknowledged that the participants' responses included three stimuli: setting, background, and foreground (Table 10). The sixth research question asks about the places that students fall in love with. Due to generality and comprehensiveness of this question, the same as the previous two questions, and despite not mentioning any specific place or even a feature of a place, it resulted in a wide range of answers received by participants, including perceptual or physical characteristics of the place and the title of a place with reference to the

Table 10. Adaptation of the Themes of the fifth question with the dimensions and motivation of place attachment. Source: authors.

Theme of the fifth question	Dimension of place attachment	Stimulus type	Researchers
Nostalgia	Behavioral	Background	Shamai (1991) Brown & Perkins (1992) Vaske & Kobrin (2001)
	Emotional	Background	Shumaker (1992) Stedman (2003)
Social Relations Camp	Social	Background	Riger & Iavrakas (1981) Fried & Gleicher (2000)
Environmental factors	Physical	Setting	Fried & Gleicher (2000) Lewicka (2009)
			Bonaiuto et al. (1999) Altman & Low (1992) Williams & Vaske (1992)
Sense of belonging to a place	Semantic	Foreground	Milligan (1998) Cross (2001) Relph (1976) Scannell & Gifford (2010)
	Cognitive	Foreground	Riley (1992) Scannell & Gifford (2010)

salient features of the place. Based on the data of this research, this question refers to different dimensions of attachment to place; and it is planned to obtain the opinions of the participants about the three stimuli mentioned in the research model, and the one which is more important in falling in love with a place. The categories indicate the presence of all three stimuli in the responses received from the participants. Some referred to only one and some to several cases in phrases. Some dealt with the nature and historical characteristics of the place and these concepts refers to the underlying factors. Some pointed to special features of the place that were related to the audience's senses or a special usage that attracted the audience. Such concepts were mentioned in the form of the theme of the mystery of the place, hereunder the background factors. Some respondents expressed their personal and inner desires for the place. These concepts were in the form of the theme of focus and self-

awareness are among background factors. Thus, it can be acknowledged that the answers of the participants in this question also include three stimuli, setting, background, and foreground (Table 11).

From the result of these answers, it can be inferred that in the process of attaching a place, we face a complex ecosystem that is the result of all stimuli (background, setting, foreground). In this ecosystem, all components play a role and are the main components of human judgment of place, which also includes how a person judges place. This cycle continues during the person's presence in that place and affects his judgment and evaluation of the dimension of place attachment.

### Conclusion

Human being cares about his feelings in the environment and feels dependent on the environment; so that sometimes he even identifies himself with

Table 11. Adaptation of the themes of the sixth question to the dimensions and motivation of place attachment. Source: authors.

Topics of the sixth question	Dimension of place attachment	Stimulus type	Researchers
The mystery of the place	Behavioral	Background	Shamai (1991) Brown & Perkins (1992) Vaske & Kobrin (2001)
	Group	Background	Mazumdar & Mazumdar (2004) Hummon (1992)
Antiquity	Emotional	Background	Shumaker (1992) Stedman (2003)
Antiquity	Physical	Setting	Fried & Gleicher (2000)
Nature			Lewicka (2009) Bonaiuto et al. (1992) Williams & Vaske (1992)
Focus and self-awareness	Cognitive	Foreground	Riley (1992) Scannell & Gifford (2010)
Sense of vitality	Semantic	Foreground	Milligan (1998) Cross (2001) Relph (1976) Scannell & Gifford (2010)
Sense of vitality	Social	Background	Riger & Iavarakas (1981)
Dynamic place			Fried & Gleicher (2000)
Dynamic place	Physical	Setting	Fried & Gleicher (2000) Lewicka (2009) Bonaiuto et al. (1999) Altman & Low (1992) Williams & Vaske (1992)



it. Understanding the meaning and the beauty of the environment or recognizing it can lead to the experience of place; therefore, the place is always judged and evaluated by its users, and the evidence of this is the human effort to create and achieve acceptable levels of quality of the place. This study sought to interpret and evaluate the perception of students of the Art University from place attachment and sought to a theory that can cover the theoretical and practical gap in the study of attachment to place. To this end, qualitative research was used according to data-grounded theory. The study presents a model in which the three stimuli of background, setting, and foreground are considered as components of attachment to place in educational spaces. In all the answers received from the participants, whether in the questions related to the personal experience of the person from the place of the Art University or in the general questions related to the personal experience of the person, despite the existing differences, all pointed to the three stimuli: background, setting, and foreground. In other words, it can be acknowledged that when a person is confronted with the concept of place, the temporal layers interfere in the person's mind. Everything a person perceives interacts with everything he remembers, and this is the moment of the overlap of the three stimuli of setting, background, and foreground. Although it is possible to study the factors of each of the stimuli separately (If former researchers have studied the factors of place attachment in this way), however, in the end, and after merging them, it is not possible to break them down into simple sets and distinguish them as individual elements. Thus, the elements, by losing their transparency and clarity, create a cohesive and interconnected ecosystem that contains a latent physical and mental coherence that is the basis of the concept of place attachment.

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