A reading of "place attachment" in spatial perception: The case of KTU department of architecture

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Abstract

The concept of space, the fundamental object of architecture, is perceived through sensory experiences, with prior spatial experiences playing a significant role in this process. Cultural diversity leads to variations in the spatial behavior of societies in different geographies, meaning that individuals experiencing the same structure may connect space, meaning, and place in diverse ways. This research builds upon Edward Relph's Place and Placelessness, which examines the phenomenological dis-course on "how places are experienced and how they change." It focuses on the concept of "place attachment," defined as the emotional, cognitive, and behavioral bond formed at the intersection of the experiencing body and the experienced space. The Architecture Department at KTU, recognized for its accessibility and its role in training students proficient in architectural terminology and skilled in designing future spaces, has been selected as the focus of this study. The research aimed to derive semantic interpretations of the physical, emotional, and social dimensions of place, following the three categories Relph used in his analysis of place. A semi-structured interview technique with predetermined open-ended questions was employed, and participants were asked to create memory maps based on the building plan. Data analysis provided insights into how users perceived the study area, identifying spaces where a sense of attachment was strong. Conversely, areas perceived as "non-places," evoking a sense of being "out of place," were highlighted. Suggestions were offered for improving such negative spaces and guiding future research.

Keywords: Edward Relph, place, place attachment, space, spatial perception

1. Introduction

Like Humans maintain an inseparable relationship with the natural and artificial environments in which they live. Individuals are both influenced by the dialogue they establish with their experienced environment and act as agents affecting that environment and other users. The field of environmental psychology, which has been a subject of discussion since the 1960s, focuses on this dynamic interaction (Steg et el., 2015). Space, a central concept within environmental psychology, plays a significant role in shaping human memories. The interaction between individuals and the spaces they occupy, as well as with other users within those spaces, encompasses various dimensions, including emotional states and spatial behaviors at both individual and social levels (Yaşaroğlu, 2017).Therefore, it is crucial to understand and define the interactions between the experiencing body, the experienced space, and other users within the confines of that space.

Kurt Lewin (1936), one of the pioneers in exploring this relationship, analyzed the connection between place and person from the perspective of psychological personality foundations, emphasizing how physical space shapes user behavior. During the 1970s, multiple scientific disciplines sought to evaluate these behaviors and the outcomes arising at the body-space interface. As time progressed, these studies generated extensive discourse on topics such as sense of place (Relph, 1976; Tuan, 1977; Steele, 1981; Jorgensen & Stedman, 2001), place attachment (Hidalgo & Hernández, 2001), place identity (Proshansky, 1978; Twigger-Ross & Uzzell, 1996), and

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community attachment (Trentelman, 2009). However, this growing body of work has introduced challenges in distinguishing similarities and differences among these concepts due to their conceptual diversity.

For instance, Lalli (1992) describes place attachment as a component of place identity, whereas Brown and Werner (1985) use the terms attachment and identity interchangeably. Nonetheless, place attachment remains a fundamental concept in studies examining how individuals interact with places and develop emotional connections to them (Altman & Low, 1992; Brown et al., 2003; Giuliani, 2003; Manzo & Perkins, 2006; Knez, 2005; Kyle et al., 2005).Drawing on this body of research, place attachment, grounded in bodily experiences of space, is understood as a multifaceted phenomenon.

The phenomenon of space, which has been the primary subject and output of the architectural discipline throughout human history, has been approached in various ways over time. To fully comprehend the concept of space, the experiencing body must first occupy a central position within the boundaries that define it. At this juncture, it is crucial to highlight the contributions of Merleau-Ponty cite, who introduced the concept of the "body-subject" through his phenomenological exploration of bodily perception, incorporating the notions of "experience" and "sensation" within the subject-object binary.

Ponty (1962) asserts that 'the body is both subject and object,' highlighting that while the body belongs to an individual, it is simultaneously perceived as a cultural object by the experiencing self. Within this framework, the experiencing body functions as a medium through which space is interpreted, facilitating a dialogue with both natural and constructed/artificial environments. As Ponty (1962) further states, "Without my body, there would be no space for me," highlighting the essential role of the body in establishing a connection with the environment. Regardless of the conditions under which space is perceived through bodily experience, a sense of place or concept of place is always present (Relph, 1976). Drawing on the perspectives of Ponty and Relph, the formation of the concept of place can be defined as emerging from the interaction between the body and space.

The existence of place has been a central topic of philosophical and scientific inquiry, explored through diverse disciplines and methodologies. Edward Relph's Place and Placelessness (1976) draws on Carl Sauer's focus on cultural landscapes, Donald W. Meinig's studies of spatial perception, and Yi-Fu Tuan's concept of "topophilia." Philosophers like Edmund Husserl and Martin Heidegger explored lived experience and Dasein (being-in-the-world), while Maurice Merleau-Ponty emphasized the embodied perception of space. Christian Norberg-Schulz applied these ideas to architecture, examining how spaces acquire meaning. Relph synthesizes these perspectives to highlight the profound significance of place in human life. Relph (1976) underscores the significance of understanding how space is experienced by the body. The objective of phenomenology, as an interpretative study of human experience, is to elucidate aspects of experience that are known but often overlooked in daily life (Seamon, 2000).

According to Relph (1976), without uncovering the essence of a space, it becomes challenging for the body to infer why that space is meaningful or meaningless. In this context, he emphasizes the body's identification with place, asserting that places are *"important centers of our immediate experience of the world."* The phenomenon of perception arises from the dialogue at the subject-object interface, facilitated through direct bodily experiences, sensory interactions, and the subsequent activation of consciousness. Ponty (2005), indicates that perception is not merely a sum of data provided by individual senses but rather a deeper and more holistic experience emerging from the interaction and integration of these senses. This perspective emphasizes that perception is not a mechanical process but a dynamic one in which the individual participates fully—physically, mentally, and emotionally. A deeper understanding of experienced space is achieved by decoding the sensory and emotional intensity, as well as the atmosphere, formed at the intersection of the experiencing body and the experienced space.

Relph (1976), a prominent figure in the conceptualization of space, argues that space is not merely a void, a plane, or a container encompassing a specific area. Instead, he contends that the way space is experienced by its users should be a central focus. Relph (1976, p. 9) defines spatial experience as the continuity between direct experience and abstract thought. Furthermore, he posits that space and society are inherently interlinked, as space is both socially constructed and shaped by the relationship between the experiencer and the experienced. This perspective integrates mental conceptions of existence with the physical dimensions of defined boundaries.

Numerous studies (Relph, 1976; Tuan, 1977; Steele, 1981; Jorgensen & Stedman, 2001) have examined the concept of "place," which emerged from discussions about space and parallels the notion of social space or socially produced space introduced by the French philosopher Henri Lefebvre (1991).

According to Cresswell (2004, p. 75), *place* refers to locations that individuals engage with and ascribe meaning to. Through the communication established between people and the spaces they experience, and the meanings attributed to these spaces, the concept of *space* transforms into the concept of *place* (Usta, 2020). Augé (2017, p. 45) describes this transformation within the context of space and place as *"supermodernity."* Architect Norberg-Schulz (1971), who approaches the concept of place from a phenomenological perspective, highlights the *spirit of place* and asserts that the concept of place arises from the human need to establish a connection with the environment. Similarly, Relph (1976), in his seminal workplace *and Placelessness,* distinguishes the concept of place within academic discourse, associating it with subjectivity and experience.

From this perspective, places are conceptualized as both a mode of thought and a state of being, grounded in user behaviors. Relph (1976) underscores the significance of the relationship between place and human experience, arguing that places are not merely defined by human activities but also function as spaces of security and identity for their users. His discourse is informed by Heidegger's (1927) existentialist concepts of *dasein* (being-in-the-world) and *dwelling* (residence). Consequently, Relph contends that place possesses an experiential quality, embodying a state of attachment essential to human existence and experience.

Given the experiential nature of places, they can also be characterized as tools for intergenerational communication (Ar, 2021). This highlights the role of place not only as a physical and functional environment but also as a medium for preserving and transmitting human experience across generations.

Relph (1976) established a conceptual relationship between *space* and *place*, which has often been treated as separate concepts in academic studies. According to Relph, what makes space unique is the dynamic relationship between action and intention, which evolves based on human experience. In this context, he argues that space and place are dialectically structured within human environmental experience. This is because spaces cannot be understood independently of the contexts in which they exist (Seamon & Sowers, 2008).

Relph (1976), in his comprehensive study of the transformation of space into place, emphasizes people's attachment to and identification with place. He defines *place identity*—closely related to the concept of place attachment—as *"the permanent sameness and unity of that [place] that distinguishes it from others"* (Relph, 1976, p. 45). Furthermore, he highlights the importance of place as a center of direct experiences (Relph, 1976, p. 141). He argues that the intensity of intention, formed by the meaning and experiences shared between the body and space, lies at the core of both attachment to and identification with place (Seamon & Sowers, 2008).

Places are composed of three interconnected dimensions that collectively give meaning to them: *physical, personal, and social dimensions, along with their respective functions* (Relph, 1976; Canter, 1977; Stokols & Shumaker, 1981; Stedman, 2003; Smaldone et al., 2005). The interplay between these dimensions fosters attachment to a place. Establishing a connection with a place is a multifaceted process, emerging through the bodily experience of the place. This process depends on the formal, functional, and semantic dimensions of the space (Özgen, 2020). Within these

dimensions, the interaction of spatial behaviors, emotions, beliefs, and knowledge plays a significant role (Altman & Low, 1992; Chow & Healey, 2008).

The concept of identity also holds a pivotal role in fostering a sense of attachment through interaction with place, as identity is integral to the essence of place (Relph, 1976; Yuen, 2005; Sharifi & Yamagata, 2016). Place identity thus emerges as a crucial element in understanding the deeper connections individuals form with their environments.

In numerous studies, the concept of attachment has been closely linked to place identity, defined as *"a substructure of one's self-identity in a broad sense, consisting of one's cognition about the physical world in which one lives"* (Proshansky et al., 1983, p. 59). The body, which experiences place through its unique personal identity, interprets and makes sense of it in distinct ways. Consequently, as personal identity evolves over time, the meaning attributed to space may also change. This interdependence suggests a reciprocal relationship between personal identity and the identity of place, which itself is a component of space.

The concept of place identity, as a facet of personal identity, plays a crucial role in the development of place attachment. Lefebvre (1969, p. 26) posits that identity is instrumental in an individual's interaction with time, space, and the entities within their environment. Beyond the physical attributes of a place, place identity is also reinforced by its social context (Twigger-Ross & Uzzell, 1996). Proshansky (1978; 1983, p. 57) describes place identity as a profound emotional connection users develop with their environment, framing it as the socialization of the self within the physical world. As both users and places undergo changes over time, new self-definitions continually emerge. Place identity, therefore, is shaped by how the physical characteristics of experienced space are internalized by the perceiving body (Relph, 1976).

In examining the relationship between place identity and place attachment, distinguishing clear boundaries between the two concepts remains challenging. Scholars have proposed various approaches to this relationship. Some argue that the two terms are synonymous (Brown & Werner, 1985), while others see attachment as a subset of identity (Lalli, 1992), or conversely, identity as a subset of attachment (Kyle et al., 2005). Others suggest that both concepts are dimensions of a broader framework (Jorgensen & Stedman, 2001) or that they represent distinct yet interrelated aspects of the human relationship with place (Hernández et al., 2007). Despite these differing perspectives, it is widely acknowledged that place identity and place attachment largely overlap (Brown et al., 2003). The key distinctions can be analyzed along two axes: the emotional bond arising from the interaction between body and space (place attachment) and the cognitive dimension that connects the self to the physical environment (place identification) (Rollero & De Piccoli, 2010). For instance, the duration of time spent in a place for emotional bonding versus the time required for cognitive identification illustrates points of divergence between these contexts.

Place attachment is commonly defined as *"an emotional connection with places"* (Hummon, 1992, p. 256), *"an individual's cognitive or emotional connection with a particular environment and setting"* (Altman & Low, 1992, p. 165), and *"a positive and affective bond or relationship between individuals and the environment they live in"* (Shumaker & Taylor, 1983, p. 233). Thus, place attachment can be understood as the bond established between individuals and their environment, place, or location. Research has consistently validated the role of social relationships in fostering emotional bonds with place (Fried, 2000; Moser et al., 2002; Pretty et al., 2003; Lewicka, 2005). From this perspective, place attachment emerges as the transition of meaning from the physical aspects of the environment to its social dimensions (Fried, 2000). In alignment with this idea, friendship and close interpersonal relationships formed within a shared space are identified as significant dimensions of place attachment (Pretty et al., 2003). A study by Mesch and Manor (1998) further demonstrated that stronger social relationships positively correlate with increased levels of place attachment.

The concept of place attachment can generally be defined as the emotional bond that arises during the *"moment"*—the process of experience—in which the relationship between the body and

space is realized. When space is viewed as a reflection of the body, changes in the meaning attributed to space can be expected as personal identity evolves over time. This is because the attachment to a place, formed through experience, is intrinsically connected to personal identity.

The concept of place attachment, which may vary based on identity, should be examined through different categories. In this context, studies on gender yield mixed findings. Some studies suggest that both genders exhibit similar levels of place attachment (Brown et al., 2003; Lewicka, 2005), while others indicate that women demonstrate a stronger emotional attachment (Hidalgo & Hernandez, 2001; Mesch & Manor, 1998). Consequently, there is no definitive conclusion about the relationship between place attachment and gender.

Age is another significant factor influencing place identity and place attachment (Ng et al., 2005; Pretty et al., 2003). This parameter is closely tied to the duration of time spent in a given place (Kasarda & Janowitz, 1974; Knez, 2005; Lewicka, 2005). A sense of belonging to a place emerges when an individual identifies with that place, indicating that time plays a crucial role in developing this feeling. Relph (1976) asserts that place attachment is directly linked to the length of time a person resides in a place and the personal interactions they engage in within that environment. However, other studies show that place attachment can also form through short-term interactions between the body and space (Bonaiuto et al., 1999; Harris et al., 1996).

A study examining the educational dimension of place attachment, conducted with a Polish sample group, found that higher levels of education negatively affect the formation of place attachment. This is attributed to the fact that highly educated individuals tend to be more geographically mobile and, as a result, less attached to specific places (Lewicka, 2005).

Studies that consider these various components separately have consistently demonstrated that place attachment is closely linked to identity. Within this context, the field research planned for this study will also focus on the relationship between identity and place attachment. The study aims to measure the place attachment of space users with varying identities and identify the parameters influencing this attachment.

2. Method

The study, centered on the concepts of place attachment and identity, deemed it appropriate to conduct fieldwork in a location where diverse identities coexist. To ensure meaningful and insightful results, it was considered essential to select participants capable of comprehending the study's subject and questions and providing well-informed responses. Accordingly, architecture students were chosen as the participant group, and the academic buildings on the university campus—where students spend the majority of their time—were identified as the study area. Place attachment refers to the emotional bond formed between the user and the place when the user needs and expectations are met in that environment. Additionally, the time spent in the space and the development of social relationships within it also contribute to the formation of this emotional bond. In this context, the study focuses on university education buildings, incorporating parameters such as cultural diversity, gender, and age.

The designer plays a crucial role in the formation of the sense of place attachment in the physical, behavioral and semantic dimensions of the designed spaces. This is because the designer is the first to experience and create the space. The formation of architectural identity is influenced by the architecture department building, the student-instructor and student-student relationships that occur within this building, and the concept of place attachment that emerges as a result.Therefore, architectural education buildings were considered as one of the important places where place attachment should be measured. In this context, the study area is defined as the education block of KTU Department of Architecture located in Trabzon city.

This study aims to identify specific areas within the KTU Department of Architecture building that participants perceive as significant places, fostering a sense of attachment. The reasons for the

lack of a sense of place in the remaining spaces were analyzed and the study was planned to be concluded by suggesting improvements for future research and for these spaces (Figure 1).
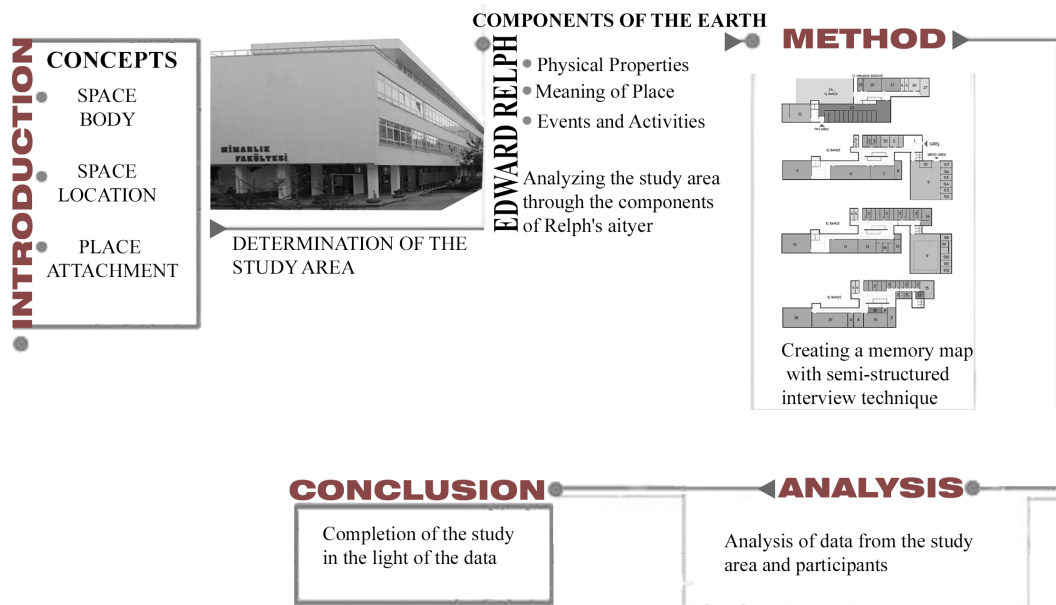
Figure 1 Flowchart of the study

Within the scope of the studies on place attachment; this study aims to test differences such as gender, age, residence time, education status in a single investigation. In this context, the sample group consisted of 1st and 4th year students of KTU Department of Architecture. Due to the age differences within the groups selected for the study, residence times may vary. For this reason, participants who lived in another province before university education and who had not resided in Trabzon except for the education period were preferred. Thus, the change in residence times within the group was controlled.

While Rubin and Babbie (2016) recommend working with three to ten participants in phenomenological studies, Charmaz (2011) states that at least ten participants should be studied (Baltacı, 2018). Therefore, the sample group was limited to a total of 12 volunteer participants, three girls and three boys from the 1st and 4th grades who did not originate from Trabzon. It was planned to ask open-ended questions about socio-demographic factors and the study area to the participants by obtaining the necessary institutional permissions. In the continuation of the study, a two-stage research method was implemented, in which participants were asked to create a memory map based on the questions provided. The relationship between space and place attachment was examined through participant interviews, utilizing narratives and mapping as complementary analytical tools. Although the school building serves diverse user groups, this study focused specifically on students who use the school as an educational space. The researchers sought to understand how this group perceives and interacts with the environment within their daily academic routines. The integration of interviews and mapping methods proved highly effective, with each method addressing the other's limitations and enriching the overall analysis.

In the study, data were obtained by using the interview technique which is one of the qualitative research methods. The interview provides the opportunity to access participants' experiences and perceptions regarding the subject being researched. Therefore, the aim was to collect data using a semi-structured interview technique with open-ended questions. Below are the explanations of the 'semi-structured interview' and 'memory maps' sections, which constitute the two stages of the study.

2.1. Semi-structured Interview

It consists of socio-demographic questions aimed at understanding the participant and questions related to the workspace aimed at interpreting the participant's use of areas within the

KTU Department of Architecture. People determine the environment they will live in with components such as culture, economic status and lifestyle. Therefore, the first goal is to identify socio-demographic characteristics of the participants. In this way, it can be analyzed how the participant's understanding of the environment and the physical characteristics of the place are in a relationship. Therefore, the rest of the study consists of questions aimed at deciphering the cognitive, emotional and behavioral elements that occur in the participants' communication with space. In this direction, the participants were asked questions such as "How would you express your connection with KTU Architecture Department Building in a sentence?", "At which point of the building do you feel connected to the place? Why?", "In what time periods do you use the university and why?". These questions are aimed at understanding which of the parameters that Relph considers as the three components of place are formed through whichone or which ones.

2.2. Memory Maps

It will be created by the participant marking and explaining the places that have meaning for him/her on the floor plans of the building selected as the study area. The points where the space transforms into a place can be identified through the mapping of the pointsat which the participants remember the sense of place in the space. In line with the analysis of the data obtained as a result of the study, it is planned to complete the study with the findings and then discussion and conclusion sections.

3. KTU Architecture Department Building

Karadeniz Technical University has a contemporary campus design as a result of a competition project won by Nihat Güner and Mustafa Polatoğlu in 1963 (Araz, 1990). In terms of its architectural configuration and physical characteristics, the Department of Architecture building is composed of two linear rectangular forms. The basic geometric form used is reflected in the organization of the interior spaces. The mass is designed in such a way that the functions belonging to academicians in the southern parts and students in the northern parts are located. There are 40 rooms in the south-facing section, and three design studios are located on each floor of the classrooms section. The solution of different functions in different areas provides student-academic separation. This separation is articulated with vertical circulation areas. The carrier red colored wall of the staircase designed at the focal point of the mass supports this hierarchical distinction in spatial terms (Figure 2).
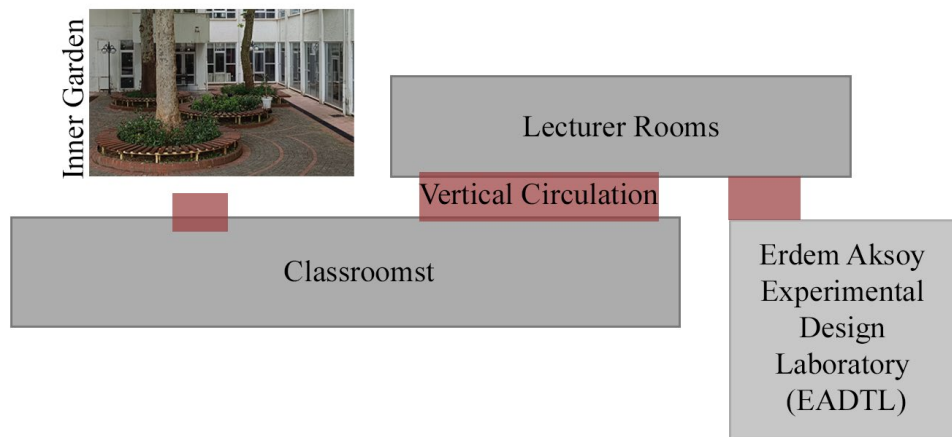

Figure 2 KTU Department of Architecture mass formation scheme

The semi-open area and foyer at the entrance of the department building serve as key meeting points for students. The foyer also functions as a "third space" (interaction area), hosting departmental events and activities. Additionally, the linear circulation corridors shaped by the building's mass are utilized as exhibition spaces. This design approach redefines the circulation areas of the Department of Architecture building, transforming them from mere transit zones into dynamic spaces for social interaction.At the time of its establishment, it was designed to

accommodate 300 students. In this context,classrooms of various sizes and different functions were designed. However, in order to meet the increasing quota over time; some classrooms were combined and almost all classrooms were organized to be used as studios. This situation caused some areas to be too deep (thin- long). Apart from these, there is the Erdem Aksoy Experimental Design Laboratory (EADTL), which is a mass and is used by all building users. This block with a gallery is generally used as a classroom for first year students. It is also the area where project submissions and seminars are held. There are three different staircases for the transition between floors. The first one is located to the left of the entrance area and is usually used by lecturers. The second is the staircase with a red wall located at the intersection of the masses. The third staircase is associated with the classroom block and is mostly used by students. This staircase overlooks the inner garden formed by the combination of the masses (Figure 3-4).
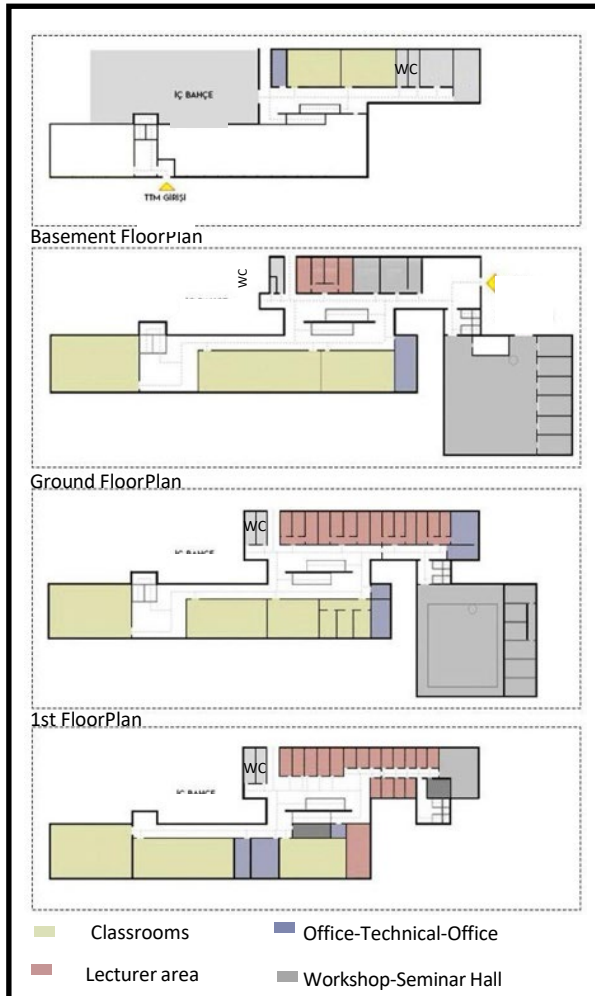
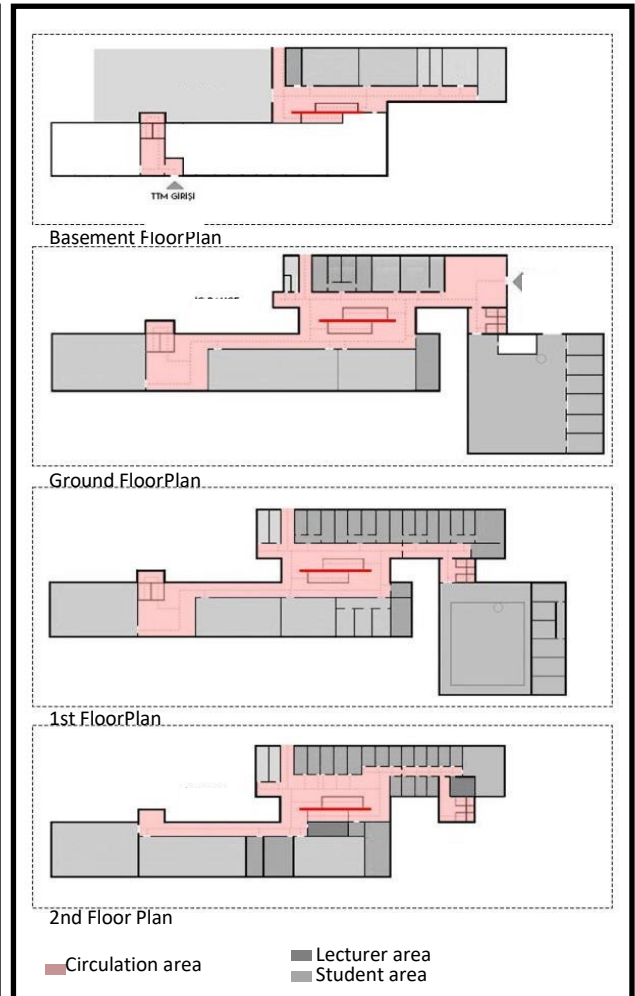**Figure 3** KTU Department of Architecture function diagram

Figure 4 KTU Department of Architecture circulation diagram

The physical configuration of the study area has been created by considering the activities and activities carried out in the building. The EADTL, designed in connection with the entrance serves as a first-year classroom. In addition to this function, departmental activities such as seminars and workshops are organized. The building entrance area is used asan area where department-related activities are held. In addition, it has functions such as exhibition gathering and waiting area. The circulation line associated with the entrance hall turns into areas where activities such as socializing take place, as well as being transition and waiting spaces for users. Another space used as activity area is the inner garden. This space, which is related to the building, creates a landscape scene for those who look from the inside, while it becomes a resting area for those who are in the space. It is also used as a gathering and celebration area for various purposes (Figure 5).

Figure 5 Collage work created with photographs of KTU Department of Architecture

The workspace contains several interrelated meanings. The most obvious meaning is the hierarchical distinction that constitutes the physical existence of the building. However, in architectural education, the significance of the instructor-student dialogue, which develops differently from other disciplines, is reflected in the common areas of use. Circulation areas act as an instructor as well as being the spaces where the education between instructor and student continues. This education, which extends beyond studio work, demonstrates that architecture is more than just studio practice. Additionally, place is not a uniform or static experience for everyone; it carries a variety of meanings based on the diverse experiences of different users. In this context, the second phase of the study began to examine space using additional factors that influence the personal interests and experiences of these users.

4. Findings

Within the scope of the research, the aim is to reveal the relationship between the concept of place attachment and age, residence time and education status through the determined sample group. In this context, the data obtained within the scope of the study were analyzed in two separate groups as first grades and fourth grades. To observe the relationship between place attachment and gender, the interview data were further analyzed in subgroups of male and female students (Figure 6).

Figure 6 Diagram showing the distribution of participants

4.1. Analysis of Semi-structured Interview Data of First Year Students

In the first stage of the study, as a result of the socio-demographic questions directed to the students, the age of the participants, the cities they live in and what these cities mean to them were obtained (Figure 7). The participants, who are 18 and 19 years old, come from various cities. These cities host different cultures and their city scales are different from each other. However, to the question "What does the city you live in mean to you?" the participants gave common answers such

as "Peace, Feeling of home". In addition, concepts expressing positive emotions such as "Trust, Comfort, Happiness, Emotional connection, Life" were used. However, they do not use the same expressions for the city of Trabzon, where they are located for education. It can be inferred that the feeling of attachment is related to the duration of residence in the place where the participants were born and raised. Some of the participants also stated that their loyalty was not only due to the city but also to their close environment living in that city. In this case, it can be said that social relations are also effective in the development of the sense of commitment.
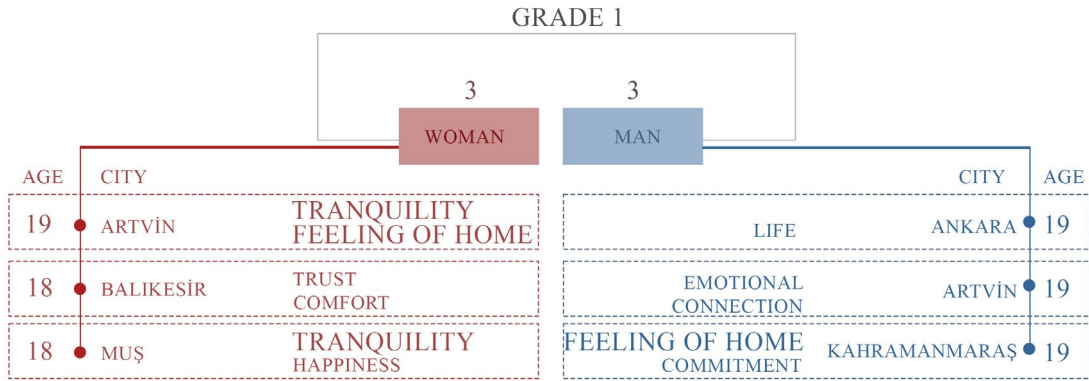
Figure 7 Diagram showing the meaning of age-city-city for first year students

As the study progresses, the participants were asked questions about the KTU Architecture Department building. These questions were asked to uncover what the building means to them, the spaces they feel connected to the place and the purposes of using the building. It was observed that the discourse related to the department building were generally associated with their dreams. A common answer from all participants regarding the place they felt most attached to was EADTL. Most of the participants stated that they gave this answer because they spent a lot of time in this place. In addition, the fact that it offers a large and free working space it offers fosters a sense of attachment for some users. For this reason, it is used by the participants to develop projects and study outside of class hours. A male student stated that he feels good in the inner garden, which is enclosed and has trees. Another male student said that he felt a sense of attachment to the place in the MA1 classroom because it was reminiscent of the old classroom system. Only one student in this participant group used the building for seminar activities other than studying (Figure 8).
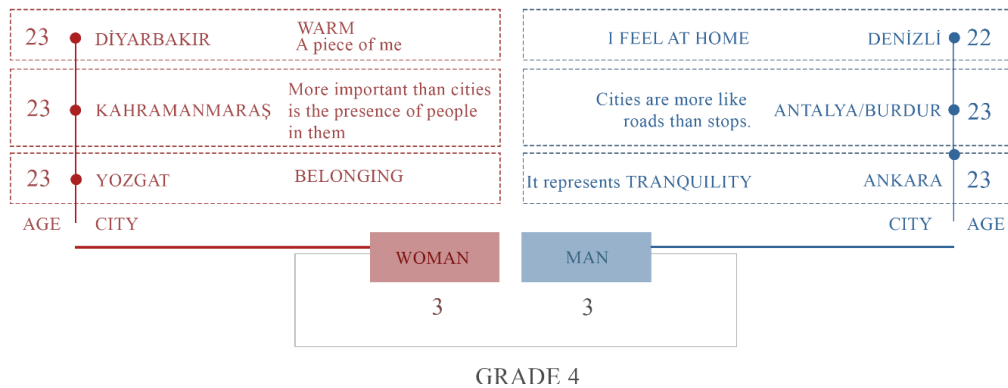

Figure 8 Expressions about KTU Architecture Department Building and the points felt depending on the location

4.2. Analysis of Semi-structured Interview Data of Fourth Grade Students

The participants, who are 22 and 23 years old, come from various cities with different scales and cultures. The participants responded to the question (What does the city you live in mean to you?) with answers such as "Peace, belonging, a part of me and the feeling of being at home". In addition, a participant from Kahramanmaras answered "The presence of people there is more important than the cities", while a participant from Antalya used the expression "The city I lived in was more like the road itself than the stop point" (Figure 9). The fact that these answers were received from

students who are completing their architectural education shows that the space can actually turn into a place with the presence of the people living there.
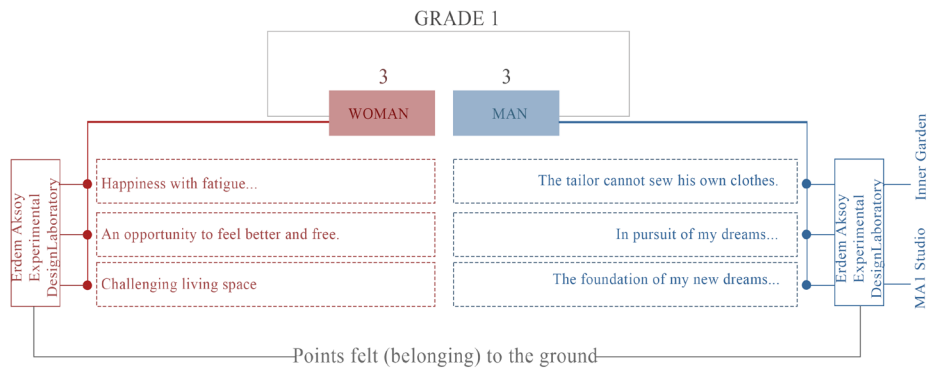
Figure 9 Expressions about the KTU Architecture Department Building and the places felt depending on the location

Thoughts about the department building were expressed with adopted sentences such as "My home in Trabzon", "My favourite place in Trabzon", "Heartfelt bond, peace", "My family, my home". When asked about the points of attachment to the place, places such as EADTL, red wall, inner garden, sitting area in the entrance canopy area, canteen, where they usually spend time to relax and socialise outside the class were given as common answers. Apart from these, individual responses such as corridors, student staircase, front of MA3 and an academic lecturer's room were also given (Figure 10). Compared to first year students, fourth year students were found to have more place attachment points.

This can be inferred to be an effect of the fact that they spent more time in the building. In this case, it can be inferred that the fact that they have spent more time in the building has an effect. Thus, it can be said that the transformation of space into place and the awareness of the components of the place experienced during this process progresses in proportion to the duration of architectural education and experience. Another noteworthy issue is that none of the classrooms is specified as a point of attachment to the place.
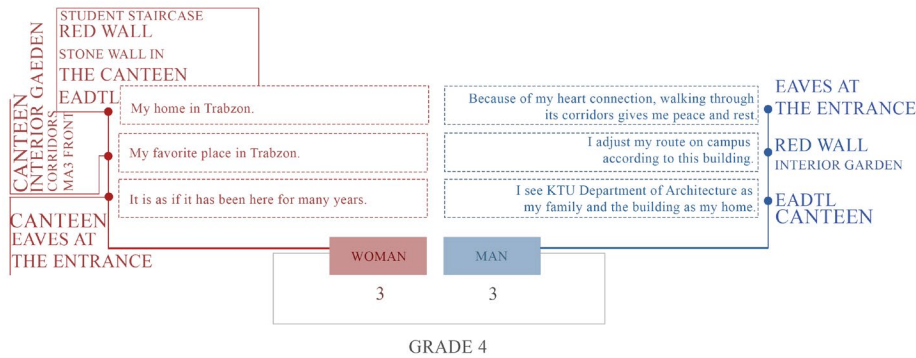

Figure 10 Expressions about KTU Architecture Department Building and the points felt depending on the location

4.3. Analysing the Memory Maps of First Year Students

The memory map data requested from the participants were processed on the building plans. Each of the indicated points represents a participant, and the opacity of the traces surrounding them was increased to provide a clear reading of place attachment. In this way, it was clearly seen in which situations and for what purpose the spaces of the building were used. It was noticed that the basement was almost never used by the participants. There was one indoor and one outdoor space used by two participants. The interior space was used once for an activity organized by an instructor within the scope of the course. The participant expresses this experience as a memory of having an active and fun time. The user who experienced the inner garden states that there is a sense of attachment to the place. In this case, the physical characteristics of the space (private

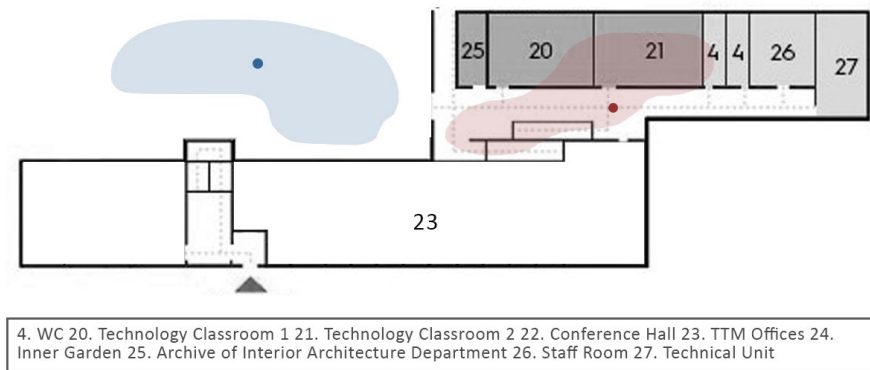space created by architectural elements) and the presence of green landscape elements play a role (Figure 11).

4. WC 20. Technology Classroom 1 21. Technology Classroom 2 22. Conference Hall 23. TTM Offices 24. Inner Garden 25. Archive of Interior Architecture Department 26. Staff Room 27. Technical Unit

Figure 11 Basement floor plan memory points

When the ground floor data is analyzed; it is observed that it is used by all participants due to the fact that the building entrance is on this floor. The entrance hall and the benches in this space are used as waiting and socializing areas. One participant makes all phone calls in the building in this area due to the large entrance space. In this context, it has been observed that he has a command of the smallest detail in space. Two participants stated that they looked at the exhibited projects while using the circulation areas. EADTL is used by the participants within the scope of the course, as well as for studying outside of class hours. Their preference for this space is due to the fact that they feel spacious, cozy and therefore comfortable. However, one participant stated that the space was stuffy. The other classrooms used on the ground floor are MA1 and MA2 studios. They are used as teaching and working areas. In MA1, which is stated to be a long and narrow space, it is difficult to reach the sound and image from the back rows.

In addition to the studios, the large area in front of the MA2 studio, where the student staircase is located, is used by one participant to study. Half of the participants visit the lecturer's room 2308 on the ground floor for critiques (Figure 12).
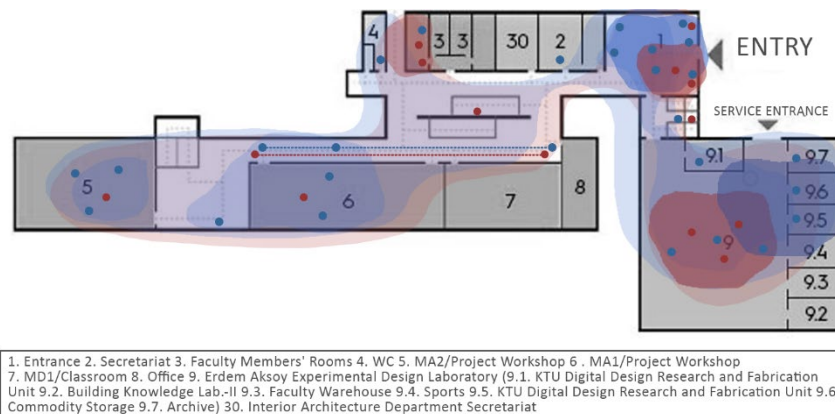

1. Entrance 2. Secretariat 3. Faculty Members' Rooms 4. WC 5. MA2/Project Workshop 6 . MA1/Project Workshop 7. MD1/Classroom 8. Office 9. Erdem Aksoy Experimental Design Laboratory (9.1. KTU Digital Design Research and Fabrication Unit 9.2. Building Knowledge Lab.-II 9.3. Faculty Warehouse 9.4. Sports 9.5. KTU Digital Design Research and Fabrication Unit 9.6. Commodity Storage 9.7. Archive) 30. Interior Architecture Department Secretariat

Figure 12 Ground floor plan memory points

The connection to the first floor is provided by the red-walled staircase, which is close to the entrance, and the student staircase in between. The staircase belonging to the educators is used for making measurements within the scope of the course and for project submission at the end of the semester. Apart from this; it was observed that it is not generally preferred by the participants, stating that it belongs to the educators.

The upper floor of the EADTL, where the final submissions are made, provides an opportunity to view the workspace on the ground floor through the gallery space. One participant described this space as a peaceful resting area. The long corridor belonging to the student block and the student staircase at the end of this corridor, which faces the inner gardenand is bright, are areas to

spend time for two participants. The wide and free hallway of the student staircase that merges with the corridor is also an area used by the participants to study. MA3 and MD2, the classrooms on this floor, offer students the opportunity to study and stay up during the deadline weeks (Figure 13).
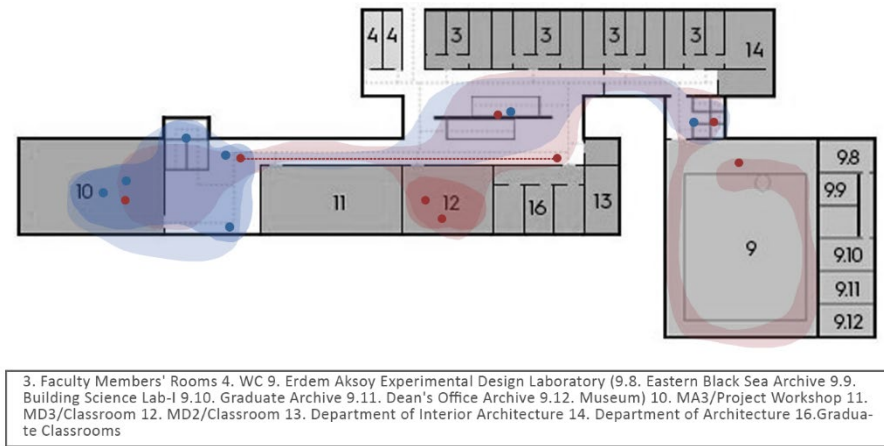
3. Faculty Members' Rooms 4. WC 9. Erdem Aksoy Experimental Design Laboratory (9.8. Eastern Black Sea Archive 9.9. Building Science Lab-I 9.10. Graduate Archive 9.11. Dean's Office Archive 9.12. Museum) 10. MA3/Project Workshop 11. MD3/Classroom 12. MD2/Classroom 13. Department of Interior Architecture 14. Department of Architecture 16.Graduate Classrooms

Figure 13 First floor plan memory points

It is observed that the memory points formed in the second-floor spaces are low compared to the other floors due to less use of this floor. Özgönül Aksoy Computer Aided Design Laboratory (ÖABDTL) used within the scope of the course is one of these memory points. This space, in one participant's memory, is muffled and closed due to the high frequency and number of desks. Another participant stated that he had a pleasant time playinggames in this space between classes. The same participant states that the MD4 studio is spacious and large due to its balcony. In addition, he states that the exhibition stand created with Atatürk photographs on this floor causes a sense of attachment to the place at that point (Figure 14).
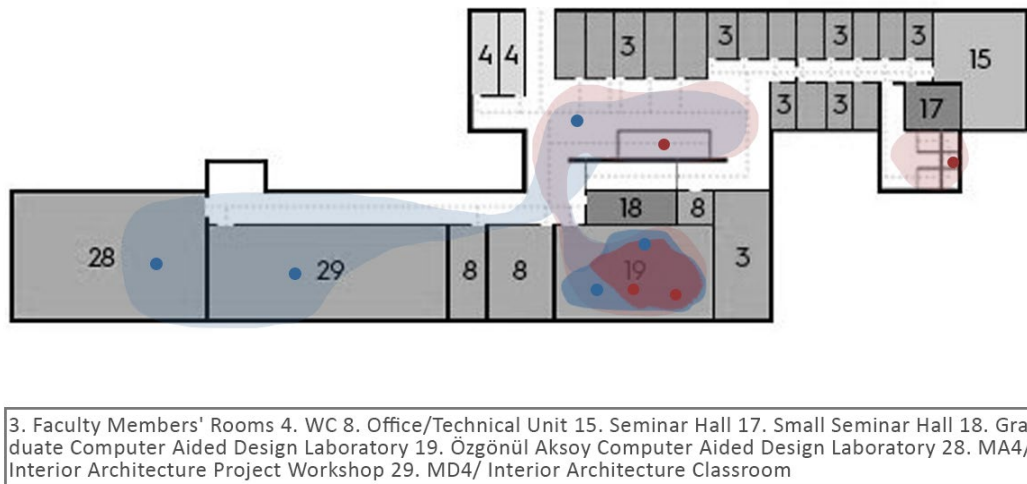

3. Faculty Members' Rooms 4. WC 8. Office/Technical Unit 15. Seminar Hall 17. Small Seminar Hall 18. Graduate Computer Aided Design Laboratory 19. Özgönül Aksoy Computer Aided Design Laboratory 28. MA4/ Interior Architecture Project Workshop 29. MD4/ Interior Architecture Classroom

Figure 14 Second floor plan memory points

### 4.4. Analysing the Memory Maps of Fourth Grade Students

When the basement floor plan is considered, the inner garden is identified by almost all users as a place where a sense of attachment to the place is awakened and memories are accumulated. This place, which is generally used for socializing, is also described as a private space. One participant mentioned the presence of green landscape elements and also mentioned komorebi (light seeping through the trees) and birdsong. He also states that it is a space that provides the opportunity to see people moving in the interior. The conference hall where the club meetings took place was marked as a memory point for two male participants. Apart from this, the technology classroom used within the scope of the course and the toilet, which was described as "isolated and scary", were mentioned as memory points on this floor (Figure 15).
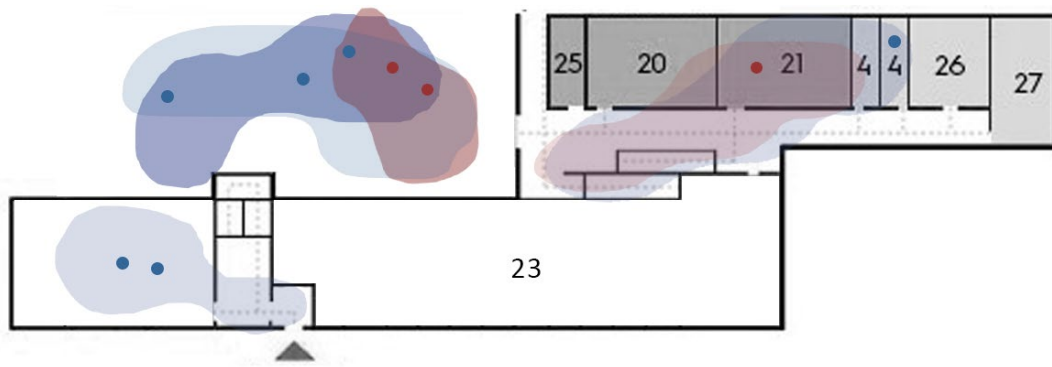
4. WC 20. Technology Classroom 1 21. Technology Classroom 2 22. Conference Hall 23. TTM Offices
24. Inner Garden 25. Archive of Interior Architecture Department 26. Staff Room 27. Technical Unit

Figure 15 Basement floor plan memory points

When the ground floor data was analyzed; it was determined that the semi-open space in front of the building entrance was used for waiting, resting and socializing. This resting and socializing area continues with the entrance hall. A participant described this space, where events and activities such as exhibitions and socializing take place, as "Our warm space surrounded by wooden windows". In addition, physical features such as the wall with the inscription of the architecture department, the statue of Mimar Sinan and benches are also included in the memories. EADTL, which is connected to the entrance hall and is one of the points where the sense of attachment to the place is the most intense, is used by all participants as an event and activity area such as interviews, exhibitions, workshops. The only negative discourse about this space is the presence of the disturbing sound of the lighting elements. The staircase, which is stated to belong to the trainers, is generally not used by the participants. The staircase with red walls is mostly preferred for vertical circulation. The inviting staircase in the center of the horizontal circulation area is one of the points where a sense of attachment to the place is formed for all participants. MA2, one of the classrooms, was marked by only one participant as it was used for lectures. However, the student staircase floor hall in front of the MA2 classroom is a socializing space for the participants as well as a place where they can study. It is an area where they eat stressful and hurried meals, especially during the delivery weeks. The staircase, which is connected to this space, is used as a place where delivery photos are taken by a participant due to its physical characteristics. Another point on this floor where half of the participants felt connected to the place was identified as the room belonging to the lecturer numbered 2308 (Figure 16).
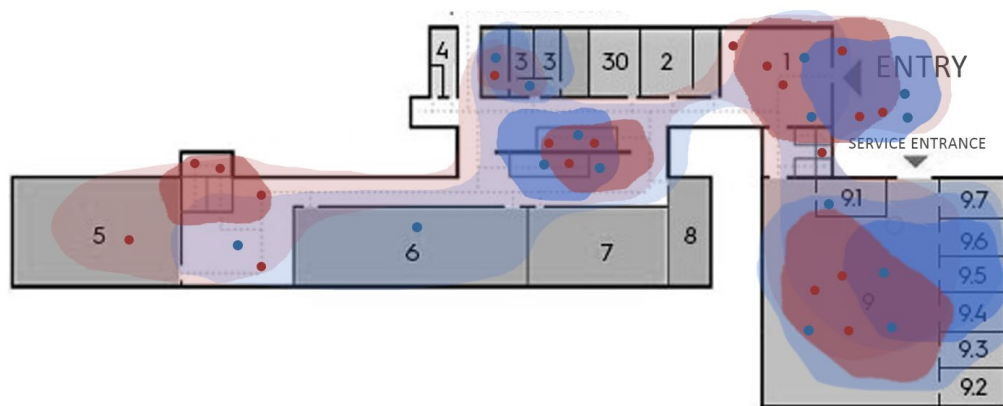
1. Entrance 2. Secretariat 3. Faculty Members' Rooms 4. WC 5. MA2/Project Workshop 6 . MA1/Project Workshop
7. MD1/Classroom 8. Office 9. Erdem Aksoy Experimental Design Laboratory (9.1. KTU Digital Design Research and Fabrication
Unit 9.2. Building Knowledge Lab.-II 9.3. Faculty Warehouse 9.4. Sports 9.5. KTU Digital Design Research and Fabrication Unit
9.6. Commodity Storage 9.7. Archive) 30. Interior Architecture Department Secretariat

Figure 16 Ground floor plan memory points

When the first floor plan memory maps were analyzed, it was observed that there was no sense of attachment to a common place for all participants. While the general communication with this floor is provided by the staircase with red walls, it is observed that most male participants use the instructor staircase during their visits to the instructor block. This staircase is also used for end-of-term project submissions. It is observed that half of the participants' memories of the gallery floor of EADTL are shaped by the deliveries that took place here. Classrooms such as MD2, MD3 and MA3 are remembered as they are used in this floor within the scope of the course (Figure 17).
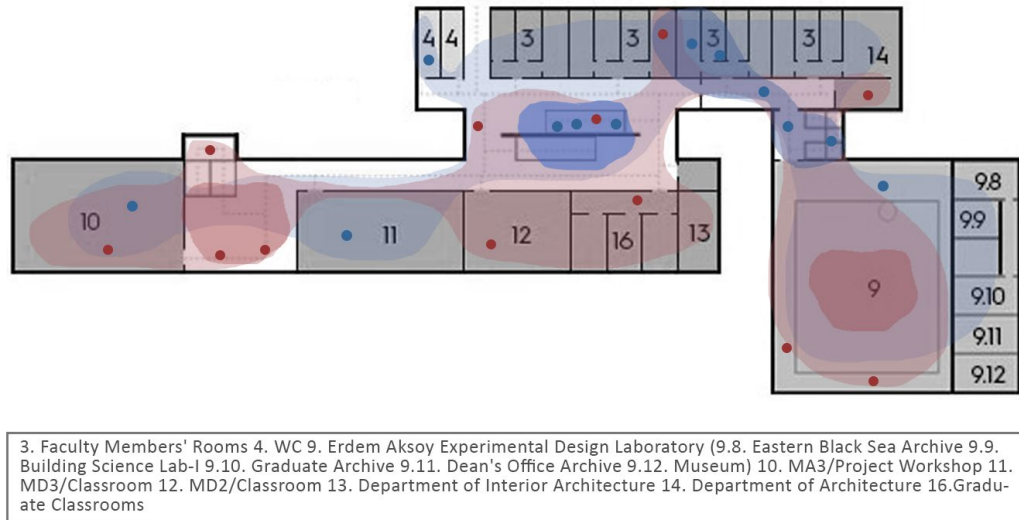

3. Faculty Members' Rooms 4. WC 9. Erdem Aksoy Experimental Design Laboratory (9.8. Eastern Black Sea Archive 9.9. Building Science Lab-I 9.10. Graduate Archive 9.11. Dean's Office Archive 9.12. Museum) 10. MA3/Project Workshop 11. MD3/Classroom 12. MD2/Classroom 13. Department of Interior Architecture 14. Department of Architecture 16.Graduate Classrooms

Figure 17 First floor plan memory points

The memory points formed in the second-floor spaces are concentrated in the red-walled staircase and chess game areas. The chess area, which is formed by the extension of the red wall and used for socializing and resting, is considered as a private area by a participant. For this reason, telephone calls within the building are made at this point. The same participant stated that he uses the toilet on this floor because it is particularly clean. The corridorbelonging to the instructor rooms has become a quiet and tense memory point for a participant. MD4 is used as the final project classroom. For one participant, this studio felt unpleasant because it was small and impractical. The MA4 classroom became a memory pointfor one participant within the scope of the course, while for another person it felt alienbecause he had not used it before (Figure 18).
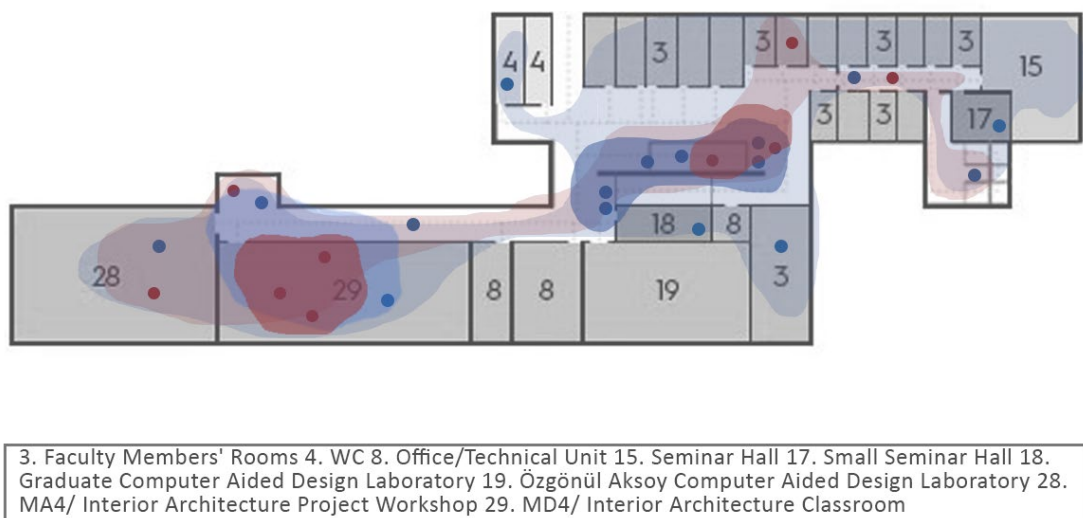

3. Faculty Members' Rooms 4. WC 8. Office/Technical Unit 15. Seminar Hall 17. Small Seminar Hall 18. Graduate Computer Aided Design Laboratory 19. Özgönül Aksoy Computer Aided Design Laboratory 28. MA4/ Interior Architecture Project Workshop 29. MD4/ Interior Architecture Classroom

Figure 18 Second floor plan memory points

5. Discussion

This study investigated the spatial attachment of students from the KTU Architecture Department and examined how their habits of space usage evolved during their education. Data were collected from first- and fourth-year students, who were selected as the sample group. Due to the intensive coursework in architectural education, the participants spent a significant amount of time in the building and described it with terms such as "feeling of home," "belonging," and "peace".

First-year students, who are in the early stages of their interaction with the KTU Architecture Department building, predominantly used the space for project development during and after class hours. The Experimental Design Laboratory (EADTL), where the primary course activities took place, emerged as the primary space to which first-year students felt strongly attached. This finding suggests that the duration of experience plays a significant role in the formation of place attachment. Furthermore, it was observed that the space's identity as a location where students could realize their dreams was more influential in creating a sense of attachment than the physical characteristics of the space itself. Notably, one participant from an Anatolian city likened the MA1 classroom to a traditional classroom layout and therefore preferred it for studying. This highlights how spaces that evoke personal or cultural associations can strengthen place attachment. Accordingly, the concept of place emerges as a key factor in place attachment, memory, and identity formation.

Fourth-year participants, who had spent more time in the building, developed a stronger sense of attachment to less frequently used and more specific areas within the building. This finding aligns with Relph's (1976) assertion that the duration of residence significantly influences the sense of place attachment. The physical features of the spaces mentioned by fourth-year students were particularly influential in shaping their attachment. This indicates that architectural education fosters cognitive awareness, which in turn enhances the emotional and intellectual connections that individuals establish with their environment.

The activities and events organized in the department building also played a pivotal role in shaping the students' sense of place attachment. First-year students predominantly associated the building with academic activities such as studying and project development. In contrast, fourth-year students perceived the space through a broader range of activities, including exhibitions, workshops, and social events. These diverse activities enriched students' attachment to and use of the space. Consequently, place attachment can be understood as the meaning derived from the transition of an experienced space from a physical dimension to a social one.

Architecture, as a multidisciplinary practice, provides its users with the opportunity to engage with spaces in varied and dynamic ways. The building in this study offered students the flexibility to use spaces for different purposes. For instance, the hall adjacent to the student staircase served as an independent workspace for some participants, while others used it for socializing and organizing events with friends, appreciating its spaciousness and physical features. Consistent with Relph's (1976) theory, the findings suggest that individuals develop a sense of place attachment by subjectivizing and personalizing their experiences in a space. The higher awareness of fourth-year students compared to first-year students highlights the contribution of architectural education to this process.

6. Conclusion

This study has demonstrated how architecture students' sense of attachment to spaces and their methods of using these spaces evolve over the course of their education. The findings underscore the following key points:

6.1. Role of Duration in Place Attachment

Extended time spent in a space enhances attachment, as it allows individuals to develop deeper connections and familiarity with the environment. Architectural education fosters cognitive awareness, which helps students appreciate the spatial and social nuances of their surroundings.

6.2. Impact of Social Activities

Events such as exhibitions, workshops, and social gatherings diversify students' interactions with the space and enrich their sense of attachment. Educational buildings should therefore be designed to facilitate such activities, creating an environment that fosters both academic and social engagement.

6.3. Designing for Flexibility and Emotional Engagement

Spaces that allow for multiple uses and foster positive associations contribute significantly to place attachment. However, mandatory spaces like classrooms often fail to evoke such emotional bonds, as they are primarily associated with functional and obligatory activities. Incorporating user-centered features into classroom design could transform these spaces into more engaging and meaningful environments.

In conclusion, this study provides valuable insights into how the design of educational buildings impacts students' academic and social experiences. By supporting both functional and emotional needs, these spaces can better serve their users and contribute to the holistic development of a sense of place attachment. Furthermore, the findings offer a foundation for future research into the relationship between architectural design and user experience in educational settings.

Acknowledgements

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Resume

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Declarations

Ethics approval and consent to participate

Ethics committee approval has been obtained.