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Evaluation of A Transition Space on A University Campus in Terms of User Experience and Spatial Performance

Üniversite Kampüsündeki Bir Geçiş Alanının Kullanıcı Deneyimi ve Mekansal Performans Açısından Değerlendirilmesi

ABSTRACT

This study aims to examine transition spaces on university campuses, which are often considered merely as circulation elements, in terms of user experience and spatial performance. The research was conducted in the open space located around the Dean's Building of the Faculty of Engineering at Karadeniz Technical University, implemented in 2025. A case study design was adopted, and spatial analysis, systematic behavioral observation, and a user survey were used together. Within the spatial analysis, the location of the site, circulation relations, entrance-exit connections, seating elements, accessibility, visibility, and environmental comfort conditions were evaluated. The systematic observation phase included 239 valid observation records and 431 observed users, while the survey was conducted with 145 participants. The findings revealed that the site functions not only as a circulation surface but also as a multifunctional open space that supports waiting, short-term resting, sitting, chatting, and, during certain time periods, eating and drinking. Survey results showed that suitability for waiting, short-term resting, and clarity of circulation received the highest scores, whereas aesthetic perception, spatial layout, and the functionality of site furnishings were evaluated relatively lower. As a result, the study demonstrates that campus transition spaces should be assessed through a user-oriented, multidimensional, and holistic perspective, and emphasizes that these spaces are significant open-space components in terms of campus life quality, social use, and spatial continuity. The research also offers an applicable evaluation framework integrating physical, behavioral, and perceptual dimensions of campus transition spaces.
Keywords: University campus, transition space, user experience, spatial performance, open space

ÖZET

Bu çalışma, üniversite kampüslerinde genellikle sadece dolaşım unsurları olarak değerlendirilen geçiş alanlarını, kullanıcı deneyimi ve mekânsal performans açısından incelemeyi amaçlamaktadır. Araştırma, Karadeniz Teknik Üniversitesi Mühendislik Fakültesi Dekanlık Binası çevresinde bulunan ve 2025 yılında inşa edilen açık alanda gerçekleştirilmiştir. Vaka çalışması tasarımı benimsenmiş ve mekânsal analiz, sistematik davranışsal gözlem ve kullanıcı anketi birlikte kullanılmıştır. Mekânsal analiz kapsamında, alanın konumu, dolaşım ilişkileri, giriş-çıkış bağlantıları, oturma unsurları, erişilebilirlik, görünürlük ve çevresel konfor koşulları değerlendirilmiştir. Sistematik gözlem aşaması 239 geçerli gözlem kaydı ve 431 gözlemlenen kullanıcıyı içerirken, anket 145 katılımcı ile gerçekleştirilmiştir. Bulgular, alanın sadece bir dolaşım yüzeyi olarak değil, aynı zamanda bekleme, kısa süreli dinlenme, oturma, sohbet ve belirli zaman dilimlerinde yeme içme gibi işlevleri destekleyen çok fonksiyonlu bir açık alan olarak da işlev gördüğünü ortaya koymuştur. Anket sonuçları, bekleme, kısa süreli dinlenme ve dolaşımın netliğine uygunluğun en yüksek puanları aldığını, estetik algı, mekânsal düzen ve alan mobilyalarının işlevselliğinin ise nispeten daha düşük değerlendirildiğini göstermiştir. Sonuç olarak, çalışma, kampüs geçiş alanlarının kullanıcı odaklı, çok boyutlu ve bütünsel bir bakış açısıyla değerlendirilmesi gerektiğini göstermekte ve bu alanların kampüs yaşam kalitesi, sosyal kullanım ve mekânsal süreklilik açısından önemli açık alan bileşenleri olduğunu vurgulamaktadır. Araştırma ayrıca, kampüs geçiş alanlarının fiziksel, davranışsal ve algısal boyutlarını entegre eden uygulanabilir bir değerlendirme çerçevesi sunmaktadır.
Anahtar Kelimeler: Üniversite kampüsü, geçiş alanı, kullanıcı deneyimi, mekansal performans, açık alan

1. INTRODUCTION

University campuses are not merely physical environments where educational activities take place (Gulpınar Sekban, 2024). These spaces are also multi-layered campus systems that shape user movements, social interaction, daily life practices, and spatial experience (McFarland et al., 2008). Campuses consist of numerous interrelated components such as buildings, circulation networks, open and green spaces, gathering places, recreation areas, focal points, and transition areas (Gulpınar Sekban, 2024). Therefore, understanding the campus as a whole is possible not only by evaluating the buildings or functional program, but also by defining, classifying, and revealing the relationships between all the components that make up the campus spatial system (Sugiarto et al., 2022). Defining campus spaces at the component level is an important requirement for both campus planning and spatial quality assessments (Lau et al., 2014). Because every spatial component within the campus affects user behavior, movement patterns, orientation processes, and the perception of space in different ways (Pan et al., 2026). While structural spaces directly support educational and work functions, open spaces complement the social, psychological, and spatial dimensions of campus life (Chou et al., 2016). In this context, defining campus components allows for understanding which areas perform which functions, which user needs they respond to, and which spatial qualities enhance the user experience. Therefore, a component-based reading makes it possible to evaluate campus spaces not only as physical entities but also as a functioning and experienced system.

Campus open spaces are one of the most important components of this defined system at the urban scale. Campus open spaces are environments where users move from one place to another, meet, wait, rest, socialize, and experience daily campus life (Hami & Abdi, 2021). From this perspective, campus open spaces cannot be considered merely as voids or open spaces between buildings. On the contrary, these areas play a decisive role in the formation of campus identity, the establishment of spatial continuity, the support of user satisfaction, and the improvement of campus life quality. The quality of open spaces directly affects the legibility, accessibility, spatial comfort, and diversity of use of the campus. Therefore, it is important to consider open spaces as a separate component group in campus planning and management and to evaluate their performance. Transition areas, within the campus open space system, hold a very special place. Because transition zones are spatial components that connect spaces with different functions, direct user movement, and ensure the continuity of circulation within the campus (Gulpınar Sekban & Düzgüneş, 2021; Xu et al., 2012). In addition, these areas are not only corridors or circulation areas where movement occurs, but also spaces that host uses such as short- or medium-term stopping, waiting, sitting, orientation, encounters, and sometimes socialization. Furthermore, they are the places where users receive education in open spaces within the university campus structure. Therefore, transition zones are not only a part of the circulation system within the campus, but also important determinants of user experience and spatial quality. However, in evaluations of campus spaces, transition zones are often considered secondary, mostly defined only as functional circulation elements (Gulpınar Sekban, 2022). Yet, the relationship that campus users establish with a space depends not only on their destinations but also on the experience of movement between these points. In other words, how users perceive and experience the campus is related not only to the quality of the buildings but also to the spatial quality offered by the open spaces between these structures, and especially the transitional spaces. Evaluating transitional spaces in terms of comfort, functionality, accessibility, legibility, aesthetic quality, and user satisfaction is important for a holistic understanding of the campus open space system. In this context, the concepts of user experience and spatial performance offer a functional theoretical framework for evaluating transitional spaces. User experience refers to the ways in which individuals perceive, interpret, use, and interact with a space; while spatial performance is related to a space's capacity to meet functional requirements, support user behavior, and provide an environment suitable for expected uses. Especially in dense and multifunctional campuses, examining transitional spaces through these two dimensions contributes to revealing not only the physical characteristics but also the success of their use.

This study aims to evaluate a transition area located on a university campus in terms of user experience and spatial performance. The study examines how the area is perceived by users, the purposes for which it is used, the usage patterns it facilitates, and whether it serves solely as a circulation area or also supports functions such as waiting, short-term rest, and dwelling. The study investigates the answers to the following questions:

i. How can a transition area on a university campus be evaluated in terms of user experience?

ii. What are the key indicators revealing the spatial performance of the area?

iii. What is the relationship between the spatial characteristics of the area and the users' usage patterns?

In this respect, the research aims to contribute to the user-centered evaluation of transition areas, which are one of the components of campus open spaces, and to help in a more holistic understanding of campus spaces.

2. METHOD

2.1. The Study Area

The study area is an open space located around the Dean's Building of the Faculty of Engineering at Karadeniz Technical University. The area was implemented on 23 December 2025 the project entitled Landscape and Planting Design Project for the Surroundings of the Dean's Building, Faculty of Engineering, Karadeniz Technical University, prepared by Prof. Dr. Cengiz Acar and Research Assistant Demet Ülkü Gülpınar Sekban (Acar & Gulpinar Sekban, 2025). According to the official document numbered 62722816-299-8681and dated 30.03.2026, the implementation of the project was completed on 23 December 2025 (Karadeniz Technical University Rectorate Department of Construction Affairs and Technical Services, 2026). This study focuses on the use of the area during the 2026 period and evaluates the site in terms of user experience and spatial performance.

This area, which was used solely as a transition zone before the implementation but was redesigned with integrated design components after the implementation, is a transitional space located within the university campus and provides connections between spaces with different functions (Figure 1). This area was chosen as the case study because of its important location within the campus circulation network, its active use by different user groups, and its suitability for not only movement but also short periods of stopping, waiting, and sitting. The area's location within the campus, the spatial focal points it connects to, its physical boundaries, and its spatial components were defined through on-site observation and field analysis within the scope of this study.

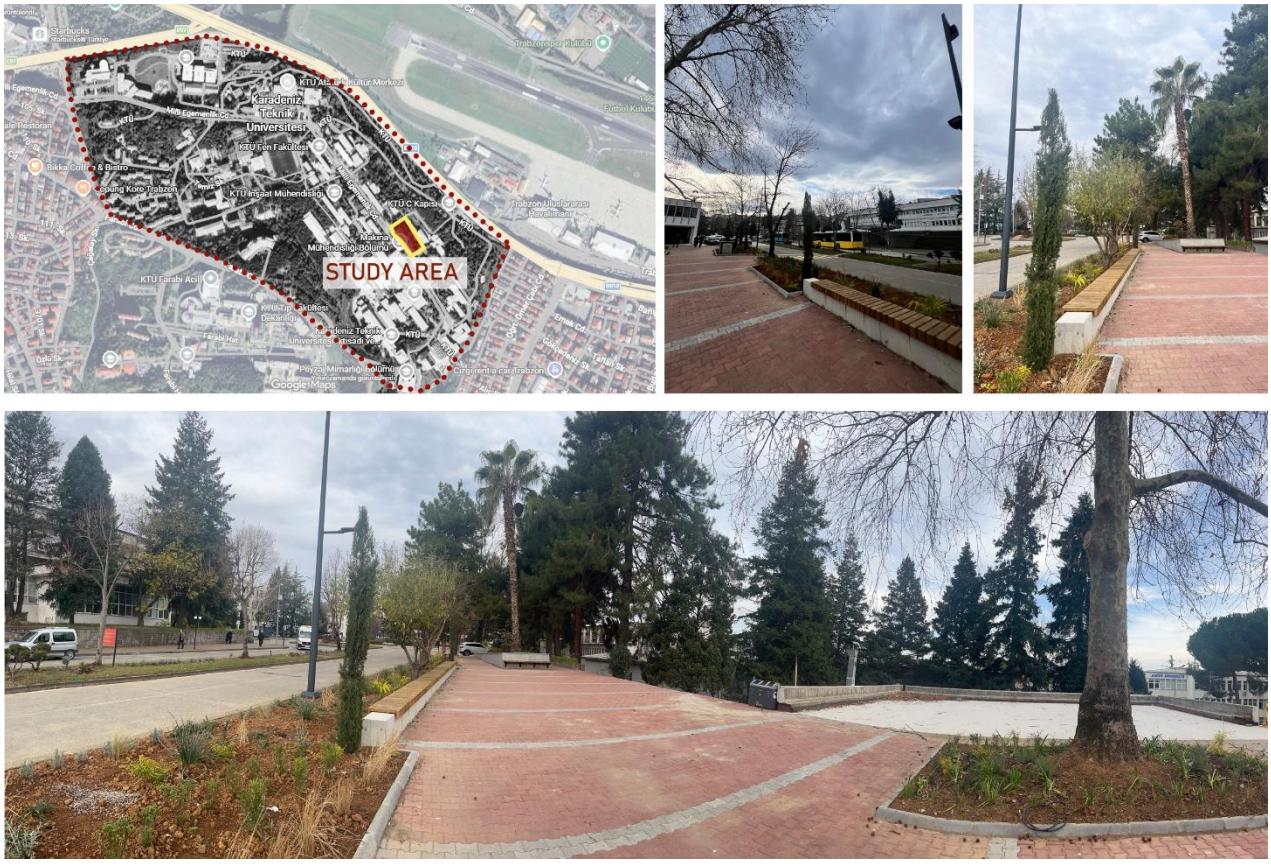

Figure 1. Study area location and photos of the work area

2.2. Methods Used in The Study

This study was conducted as a case study based on a sample area, aiming to evaluate a transition area located on a university campus in terms of user experience and spatial performance. In the study, the physical characteristics of the area, the users' behaviors in the area, and their evaluations of the space were considered together. Accordingly, a mixed methods approach was adopted in the research. In this context, quantitative and qualitative data were used together. On-site examination and spatial analysis were carried

out to determine the spatial characteristics of the area, systematic observation was carried out to reveal usage patterns, and a survey was conducted to determine user evaluations. Data were collected in stages in the study;

1. Spatial analysis,
2. Systematic behavioral observation,
3. User survey

In the first stage of the study, the physical and spatial characteristics of the study area were examined on-site. This included evaluating the area's location within the campus, circulation relationships, entrance and exit connections, seating areas, furnishing elements, visibility, orientation, accessibility, open space organization, and the spatial opportunities it offers to users. Thus, the physical components that could affect the user experience and spatial performance of the area were identified.

Subsequently, systematic observation was conducted to determine how users utilized the area (Gulpınar Sekban & Acar, 2024). Observations were carried out on different days (repeated three times each day and at different times of the day). User behaviors were recorded under specific categories. These included patterns such as passing through the area, stopping, waiting, sitting, short-term rest, individual use, dual use, and group use. Furthermore, changes in user density over time, which parts of the space were used more frequently, and dwelling trends were also recorded. The obtained observational data were used to evaluate the actual usage patterns and spatial performance of the area.

Finally, a survey was conducted to determine users' experiences and evaluations regarding the workspace. A total of 145 valid questionnaires were evaluated within the scope of the study. The participants consisted of campus users who had experienced or used the study area and voluntarily agreed to participate in the survey. Since the total number of potential users of the transition area was not fixed and could vary depending on daily campus use, the minimum required sample size was estimated using the sample size formula for an unknown or large population: $n = Z^2p(1-p)/d^2$. In this calculation, a 95% confidence level was accepted ($Z = 1.96$), the maximum variability assumption was used ($p = 0.50$ and $q = 0.50$), and the acceptable sampling error was taken as approximately 8.2% ($d = 0.082$). Accordingly, the minimum sample size was calculated as approximately 143 participants, and the 145 valid questionnaires obtained in the study were considered sufficient for the survey analysis. The survey form consisted of two sections. The first section included questions about the participants' basic user profile, while the second section consisted of 10 closed-ended statements designed to evaluate the user experience and spatial performance of the workspace. Participants' evaluations were obtained using a 5-point Likert scale. The scale included dimensions of accessibility, perceptibility, aesthetics, safety, and overall satisfaction to determine user experience, and dimensions of circulation arrangement, support for user movement, waiting, short-term rest, and functionality of equipment elements to determine spatial performance. In the study, the evaluation criteria were addressed under two main headings: user experience and spatial performance. Within the scope of user experience, dimensions such as comfort, perceived safety, aesthetic preference, satisfaction, accessibility, and spatial readability were evaluated. Within the scope of spatial performance, the level of support for circulation in the area, its capacity to allow waiting and short-term stays, diversity of use, functionality of equipment, and the impact of spatial organization on usage patterns were examined. The data obtained were evaluated both quantitatively and qualitatively. Survey data were analyzed using descriptive statistics such as frequency, percentage, mean, and standard deviation. Observational data were classified and interpreted according to usage types and intensity. These were evaluated together with spatial analysis findings.

3. RESULTS

3.1. Findings Based on Spatial Analysis

The spatial analysis findings regarding the study area were evaluated based on the area's location within the campus, continuity of circulation, physical components, accessibility level, and spatial opportunities offered to the user (Acar and Gulpinar Sekban, 2025). The findings show that the area has moved beyond being merely a transitional surface where movement is maintained, and has gained a more defined open space that allows for different forms of use. According to the analysis findings, the study area has clearly defined entry and exit points and offers a spatial configuration that supports the continuity of pedestrian circulation within the campus. The accessibility of the area from different directions allows users to experience this space not only as a linear passageway but also as an intermediate space where short-term

usage behaviors can occur. The clarity of the entrances and exits increases the readability of the area; this also supports the users' orientation and transition experience. One of the most important findings defining the spatial character of the study area is that the area, which previously had a more permeable structure and was defined by the relationship between the main road and the sidewalk, is now separated from the road by a green buffer zone. This separation not only creates a physical boundary but also contributes to the area becoming a more distinct, safer, and more defined open space for pedestrian use. The separation of the road by a green band ensures that the area is directly protected from the pressure of vehicular traffic. Thus, it prepares the ground for the space to transform from a surface serving only passage into an environment that supports more static uses such as sitting, waiting, and resting. This can be considered an important spatial feature that contributes to the perception of the area by the user as a "place where one can stay" rather than just a "place to pass through". The seating units located within the area stand out as an important finding in terms of spatial analysis. These units show that the passage area supports not only its function of supporting circulation but also uses such as short-term rest, waiting, and observing the surroundings. The presence of seating elements enhances the functional diversity of the area within the campus open space system and offers users alternative uses beyond transit. In this context, seating units can be considered one of the fundamental components that strengthen the spatial performance of the area. Because the availability of seating in a transit area shows that the space is not only a corridor used for movement, but also an open space component that allows for short-term rest. This also contributes to the perception of the area as more inviting and functional in terms of user experience. Spatial analysis findings show that the study area offers different micro-spatial conditions in terms of environmental comfort. Part of the area is shaded, while another part is sunny. The formation of shaded areas is due to the crown structure of the *Platanus orientalis* individuals present in the area. This reveals the decisive influence of natural plant elements on the spatial and environmental quality of the area. The presence of shaded areas is a significant advantage that can provide environmental comfort to the user, especially in terms of sitting and short-term resting behaviors. Conversely, the absence of an additional structural shading element in the area shows that the possibility of shade is entirely dependent on the existing tree presence. This situation suggests that the area's capacity for shade utilization is limited by the location and canopy width of the natural vegetation. Therefore, it can be said that the balance between sun and shade in the study area is a variable that can affect user behavior. The ramps located within the area offer an important finding in terms of spatial accessibility. The fact that the ramps maintain circulation by connecting with pedestrian crossings and sidewalks shows that the area is not only a physically connected space but also an open space component that provides accessibility continuity. This feature reveals that the study area is integrated into a seamless circulation network in terms of pedestrian movements within the campus. The presence of ramps can be considered an inclusive element supporting the access of different user groups to the space. This arrangement, which provides continuity in terms of accessibility, strengthens the user-friendly nature of the area and increases the functional performance of the transition area. In this respect, the ramps can be read not only as a technical access element but also as an important design component supporting spatial integrity.

The green buffer area extending along the vehicular road enhances the spatial integrity of the study area. The green buffer zone is one of the fundamental components that determine the spatial organization. This buffer zone, on the one hand, softens the vehicular-pedestrian relationship, and on the other hand, makes the boundaries of the open space more distinct. Thus, a more controlled, calmer, and more defined usage framework is created within the area. The presence of a green buffer zone offers a twofold contribution to spatial organization. Firstly, it creates a visual and physical separation between the vehicular road and the area where users sit, wait, and pass through. Secondly, it contributes to the open space moving beyond being merely a transition plane consisting of hard surfaces and having a more balanced spatial composition. Therefore, the green buffer zone can be considered a decisive element in terms of both functional separation and the production of spatial quality.

3.2. Observation Findings on Use Patterns

In the systematic observation study conducted to determine the usage patterns of the study area by users, a total of 239 meaningful observation records were evaluated, and a total of 431 users were observed during this process. Observations were carried out on different days of the week and weekend, at different times of the day. User behaviors were recorded under the headings of passing, slowing down passing, walking, stopping, waiting, sitting, short rest, chatting, social interaction, and eating and drinking. When the general distribution was examined, it was determined that the most frequently observed usage pattern in the study area was passing (66 records and 109 users). This was followed by sitting (42 records and 75 users), short

stopping and waiting (39 records and 58 users), and slowing down passing and walking (34 records and 63 users). This finding shows that the basic function of the area is to support circulation. However, it also shows that it has the characteristics of a multifunctional campus open space that allows for sitting, waiting, and short rest. When usage varied according to time periods, it was observed that the area was used more for individual passage during weekday mornings (09:00-09:15). In this time period, individual passage was the most common form of use among a total of 62 observation records, followed by short periods of sitting and standing/waiting (Table 1). It was determined that in the morning hours, users mostly utilized the area as a functional passageway, either due to the start of classes or their orientation towards campus, although a limited number of users exhibited short-term sitting behavior in the area. This indicates that the area has a predominantly movement-oriented character during morning use.

Table 1. Distribution of observed users by time period

Time Period	Observation Record	Number of Users	Dominant Usage
Weekday Morning (09:00-09:15)	63	103	İndividual passes, short stays
Weekday Afternoon (12:30-12:45)	58	109	Passes, waiting, short stops
Weekday Evening (20:30-20:45)	44	78	Passes, sitting, chatting
Weekend Morning (09:00-09:15)	18	27	Walks, individual passes
Weekend Afternoon (12:30-12:45)	19	36	Passes, short stops
Weekend Evening (20:30-20:45)	37	78	Sitting, eating-drinking, walking, long stays

A significant change in the use of the area was observed during weekend evenings. Of the 37 observation records from this period, sitting, eating, and walking behaviors stood out. Users spent longer periods in the area, with an increase in sitting and eating behaviors in particular. Eating, drinking, and prolonged sitting behaviors were mostly carried out by groups of 3-4 people during the weekend evening period, while short periods of rest and transition were more common among individual and paired users. Furthermore, an increase in the number of walking users indicates that the area functions not only as a transit space but also as an open space accompanying leisure activities during weekend evenings. In terms of user type, a significant portion of the observation records were individual use (103 records) and use by groups of 3-4 people (54 records). However, considering the total number of users, groups of 3-4 people constituted the largest share (187 users). This suggests that the area offers a spatial configuration suitable for group activities such as sitting, chatting, and eating.

3.3. Findings From The User Survey

A total of 145 surveys regarding the transition area located on the university campus were evaluated within the scope of the research. Descriptive analyses conducted on the 10 items in the scale show that users generally evaluate the work area positively. Item averages range from 3.99 to 4.63, and it was observed that the average of all items was above the middle value on a 5-point Likert scale (Table 2). When the obtained data were examined on a question item basis, it was determined that the highest averages were concentrated in the statements "This area is a suitable place for waiting" (Q5, $\bar{x}$=4.63), "This area is suitable for short-term rest and sitting" (Q6, $\bar{x}$=4.59), "The circulation layout of the area is clear and understandable" (Q2, $\bar{x}$=4.52) and "This area is an open space that is easily perceived and used within the campus" (Q1, $\bar{x}$=4.51). This finding indicates that users perceive the area not merely as an open space serving only passage, but also as a space supporting functions such as waiting, short-term sitting, and resting. Lower averages were observed in the items “I find this area aesthetically pleasing” (Q8, $\bar{x}$=3.99), “The spatial arrangement of the area supports user movement” (Q4, $\bar{x}$=4.02), and “The furnishing elements in the area are used functionally” (Q7, $\bar{x}$=4.14). While these values are still within the positive evaluation range, they show that the area is evaluated more limitedly in terms of aesthetic perception, spatial arrangement, and the functionality of furnishings compared to other dimensions. Furthermore, when examining the positive response rates, it was determined that 99.31% of users responded with “agree” or “strongly agree” in item Q1, 93.79% in item Q6, and 92.41% in item Q5. This supports the assessment that the study area is generally considered accessible, understandable, and suitable for short-term use by users.

Table 2. User evaluations regarding the questionnaire items

Question Code	Question	Mean	Std. Deviation	Positive Response Rate (%)
Q1	This area is an easily visible and usable open space within the campus.	4.51	0.52	99.31
Q2	The circulation pattern of the area is clear and understandable	4.52	0.94	80.00
Q3	I find this area accessible.	4.45	0.81	80.00
Q4	The spatial layout of the area supports user movement	4.02	0.95	69.66
Q5	This area is a suitable place to wait	4.63	0.62	92.41
Q6	This area is suitable for short periods of rest and sitting	4.59	0.61	93.79
Q7	The equipment elements in the area are being used functionally	4.14	0.82	72.41
Q8	I find this area aesthetically pleasing	3.99	0.81	79.31
Q9	I feel safe in this area	4.37	0.98	75.17
Q10	Overall, I am satisfied with using this space	4.37	0.79	80.69

Within the scope of the study, the survey questions were evaluated under two main dimensions. Accordingly, the mean score for the user experience dimension was calculated as 4.34, and the mean score for the spatial performance dimension was 4.38. The overall scale mean was 4.36, indicating a high level of positive evaluation in both dimensions. This result shows that the examined transition area is evaluated as a positive open space component in terms of both user perception and functional performance. In the reliability analysis conducted to determine the internal consistency of the scale, the Cronbach's alpha coefficient was found to be 0.795. This value indicates that the scale is generally at an acceptable level of reliability. However, when the item-total relationships were examined, it was observed that item Q5 had weaker agreement with the other items. It was determined that when this item was removed from the scale, the alpha coefficient increased to 0.842. As a result of the one-sample tests conducted using the mean value of the Likert scale, 3, it was determined that the means of all items were statistically significantly higher than this value ($p<0.001$). This result reveals that users evaluated the area not only moderately, but significantly positively.

4. DISCUSSION

This study evaluated a transition area located on a university campus in terms of user experience and spatial performance. The findings revealed that the area not only functions as a circulation surface providing movement between two points, but also possesses the characteristics of a multifunctional open space allowing for different uses such as waiting, short breaks, sitting, chatting, and eating and drinking at certain times. This result shows that considering transition areas as secondary or residual spaces within campus open spaces is insufficient; on the contrary, these areas should be considered as one of the fundamental components that directly shape user experience, spatial continuity, and the daily rhythm of campus life. When evaluated in the context of the first question of the research, "How can a transition area on a university campus be evaluated in terms of user experience?", the survey findings clearly show that the area is generally perceived positively by users. In particular, suitability for waiting (Q5), suitability for short breaks and sitting (Q6), openness of the circulation pattern (Q2), and ease of perception and use of the area (Q1) stood out as the items with the highest averages. This situation demonstrates that users experience the area not only as a transit point providing physical access, but also as an open space that supports short-term stays (Küpper & Seyfried, 2023). Therefore, the quality of user experience is not limited solely to the accessibility or visibility of the area (Thapaliya et al., 2024). The fact that the area offers the user the opportunity to stay, stop, and linger for short periods also appears to be an important component of a positive spatial experience (Küpper & Seyfried, 2023). This data becomes more meaningful when read together with the findings of the spatial analysis. The separation of the area from the vehicular road by a green buffer has contributed to the transformation of a surface, previously defined by a more permeable and direct road-sidewalk relationship, into a pedestrian space with more clearly defined boundaries. This is because the created buffer zone and buffer landscaping delimit the space both physically and instrumentally (Bekar et al., 2018; Ercan Oğuztürk & Pulatkan, 2023). This physical separation not only created a sense of security or boundary, but also produced a spatial foundation that enabled the area to evolve from a "place to be passed through" to a "place to be stayed in." Indeed, the high scores on survey items related to waiting and sitting functions, and the observational findings showing a significant presence of sitting, short-term resting, and standing-waiting behaviors, suggest that this transformation in spatial design is reflected in user behavior. In other words, the redefinition of the physical boundaries of the area and the organization of open spaces directly affected the relationship users had with the space (Gulpinar Sekban, 2026b; Onur, 2025).

In response to the second research question, "What are the key indicators revealing the spatial performance of the area in question?", it can be said that spatial performance becomes visible through four main components: openness and continuity of circulation, capacity to allow short-term stays, accessibility, and diversity of use. The clear entrances and exits of the area, its integration into the campus pedestrian circulation, and its uninterrupted connection with pedestrian crossings and sidewalks via ramps stand out as elements that strengthen the access and circulation dimension of spatial performance. In addition, the presence of seating elements, the variety of shade and sun, and the relatively calm spatial atmosphere created by the pedestrian surface separated from the vehicular road increase the waiting and resting capacity of the area (Gulpinar Sekban, 2026a; Langenheim et al., 2020). Although transit behavior remains dominant in the systematic observation findings, the continuous observation of sitting, waiting, and short-term resting shows that the spatial performance of the area cannot be explained solely by its capacity to direct movement (Kahveci & Onur, 2022). However, the data obtained also reveal that the area does not perform equally well in all dimensions. In the survey data, aesthetic evaluation (Q8), the level at which the spatial arrangement supports user movement (Q4), and the functionality of the equipment elements (Q7) have lower averages compared to other items. This finding is important for understanding the spatial dimension. Because, although the area is generally evaluated positively, it suggests that users do not perceive the space as a fully completed open space with a strong functional quality. In particular, the relatively low scores of items Q4 and Q7 reveal the difference between the presence of physical components and the extent to which these components are perceived as sufficient, balanced, and effective by the user. In other words, the fact that an area can be used for passage and waiting does not necessarily mean that it is undeniably successful in terms of its spatial organization or equipment performance (Gulpinar Sekban, 2026b). This shows that in the evaluation of campus open spaces, it is not sufficient to simply identify physical elements at the presence or absence level; user perception must also be included in the analysis (Dong et al., 2023). At this point, the Cronbach's alpha coefficient of 0.795 indicates that the scale used is generally reliable; however, it is noteworthy that item Q5 shows a weaker correlation with the scale as a whole. The fact that the statement "This area is a suitable space for waiting" has the highest average shows that the waiting function is perceived quite clearly and strongly by users. However, the weaker correlation of the same item with the scale as a whole suggests that this function may be experienced partially independently of other qualities of the area (Hasan et al., 2015). In other words, while users may find the area quite suitable for waiting, they may have been more selective in other dimensions such as aesthetics, equipment functionality, or spatial arrangement. This situation reveals that transitional areas can perform very strongly in some functional dimensions and more limitedly in others; therefore, such spaces should be evaluated not with a single quality criterion, but with a multi-dimensional framework.

Regarding the third research question, "What is the relationship between the spatial characteristics of the area and the users' usage patterns?", there is a significant overlap between the findings of the systematic observation and the spatial analysis. The spatial analysis described an open space structure separated from the vehicular road by a green buffer, containing seating units, incorporating shade-sun differentiation, and ensuring continuous accessibility. The observation findings show the behavioral equivalent of these physical characteristics. While passage remains the most dominant usage pattern, the regular observation of behaviors such as sitting, waiting, short rests, conversation, and eating and drinking indicates that the physical characteristics of the area offer users alternative usage scenarios. The prominence of individual passages, especially during weekday mornings, confirms the area's functional role in campus circulation; while the increase in sitting, eating, walking, and longer stays during weekend evenings reveals that the same area opens up to different usage patterns depending on the time. This supports the idea that spatial performance should be considered not as a fixed and one-dimensional feature, but as a dynamic phenomenon that changes according to time, user profile, and usage context (Sakacı, 2020). Temporal differentiation is one of the most striking findings of this study. The use of the area during weekday mornings, primarily for individual passage and brief stops, is associated with the intense movement patterns related to the daily functioning of the campus and the start times of classes. In contrast, during weekend evenings, users spend more time in the area, sitting and eating/drinking behaviors increase, walking becomes more visible, and small groups of 3-4 people are particularly dominant. This finding demonstrates that campus transit areas can be actively used not only during functional times but also during leisure time, and that the social capacity of the space changes according to the context of its use. Therefore, defining the transit area solely as a circulation line heavily used during daytime hours would be incomplete; the area also functions as an open space supporting rest, encounters, and daily socialization practices depending on the time. The relationship between user type and behavior also supports this

multifunctional structure. The observation data shows that individual use is mostly associated with passage, brief waiting, and resting; while group use of 3-4 people is associated with sitting, chatting, and eating/drinking, revealing that the area is used in different ways at different social scales. This result is particularly important in terms of transitional spaces, as such spaces are often considered only as surfaces that guide individual movement. However, this research shows that, when appropriate physical conditions are provided, transitional spaces can also support small group interactions. This indicates that the social capacity of transitional spaces within campus open areas needs to be reconsidered. Furthermore, the lower aesthetic evaluation score compared to other items in the study should also be discussed. A positive score in the functional dimensions of the space does not necessarily mean that the aesthetic quality is equally strong. This shows that there is a certain distinction between users perceiving a space as "functional" and them perceiving it as "liking" it. A space that is strong in terms of spatial organization, accessibility, and waiting capacity may be perceived as more limited in terms of aesthetic integrity, quality of equipment, or variety of shading. The fact that shading in the area largely depends on the existing *Platanus orientalis* crowns and that there are no additional structural shading elements suggests that environmental comfort may vary, especially at certain times and seasons. This should be considered a factor that can affect both aesthetic perception and user comfort. Therefore, despite the overall success of the area, it can be said that there are further opportunities for improvement in terms of shading, equipment placement, and spatial integrity for a more balanced environmental comfort and a stronger spatial identity.

Another important contribution of this study is its concretization of the approach of reading campus open spaces as a "system of components" specifically in the context of transitional spaces. As emphasized in the introduction, campuses are multi-layered structures composed of interconnected physical and social components. The findings show that the transitional space is not merely a space between structures within this system, but a component that generates its own function. In this respect, the study supports the theoretical framework regarding the necessity of defining and evaluating campus components with field findings. Here, the transitional space is not only a connecting element, but also appears as an open space component that generates user experience through readability, accessibility, waiting capacity, social interaction, and short-term stay opportunities. On the other hand, the study has some limitations. The fact that the research was conducted on a single sample area makes it difficult to directly generalize the findings to all campus transitional spaces. In addition, since user evaluations are based on subjective perceptions, they may have been influenced by variables such as seasonal conditions, usage intensity, time of day, and user expectations. While the fact that observations were repeated at specific time intervals is a significant advantage, research supported by studies under different seasonal conditions or over longer periods could reveal the temporal performance of transition zones more comprehensively. Nevertheless, this study, by combining spatial analysis, systematic observation, and user surveys, offers a holistic framework that allows for the evaluation of transition zones at physical, behavioral, and perceptual levels.

5. CONCLUSION

This study evaluated a transition area located on a university campus in terms of user experience and spatial performance; the findings revealed that the area functions not only as an open space component providing circulation, but also as a multifunctional space allowing for different forms of use such as waiting, short rest, sitting, meeting, and social interaction at certain times. When the data obtained from spatial analysis, systematic behavioral observation, and user surveys are evaluated together, it is seen that there is a direct relationship between the physical structure of the area and user behaviors. The research findings show that a transition area separated from the vehicular road by a green buffer, containing seating units, offering shade-sun variety, and maintaining accessibility continuity is evaluated by users not only for transit purposes but also in line with short-term stays and daily use practices. In particular, the high scores of statements regarding waiting, short rest, and circulation openness in the survey results; The observation results reveal that, in addition to transitional behaviors, usage patterns such as sitting, waiting, short breaks, conversation, and eating and drinking at specific times confirm that the area exhibits a multi-layered spatial performance. This result shows that campus transition areas should not be considered merely as technical areas that direct movement, but that these areas are also important open space components that shape user experience and campus quality of life. One of the important findings of the study is the need to rethink the position of transition areas within the campus spatial system. It is understood that these areas, traditionally considered as connecting surfaces between buildings or circulation corridors, can be transformed into high-quality open spaces that allow for short stays, waiting, and social interaction with appropriate spatial arrangement components. In this context, the area should be evaluated not only in terms of its movement capacity but also in terms of criteria such as readability, accessibility, comfort, equipment functionality,

environmental diversity, and flexibility of use. The contribution of this study to the literature can be evaluated at three main levels. First, the study opens up a discussion on the approach that considers campus open spaces as a system of components, through a concrete example at the scale of a transition area. Secondly, by moving beyond existing approaches that mostly define transitional spaces as secondary and purely functional circulation elements, the study reveals that these spaces are open areas that generate user experience and spatial performance. Thirdly, by using spatial analysis, systematic behavioral observation, and user surveys together, the study offers a viable methodological framework for the holistic evaluation of the physical, behavioral, and perceptual dimensions of campus transitional spaces. In this respect, the research contributes to making transitional spaces more visible in studies on the evaluation of campus open spaces. However, the study has some limitations. The fact that the research was conducted on a single sample area limits the direct generalization of the findings to different campuses or different spatial contexts. In addition, since user surveys are inherently based on subjective evaluations, user perceptions may have been influenced by variables such as seasonal conditions, usage intensity, time of day, and individual expectations. While the observations, which were carried out in specific time periods, reveal a significant portion of usage patterns, longer-term and seasonal comparative observations would allow for a more detailed evaluation of the temporal performance of the area. Future studies applying a similar method to different campuses and different types of transition areas could contribute to a comparative evaluation of transition area usage patterns. Furthermore, examining differing experiences across user groups, assessing seasonal variations, and testing the impact of design variables such as shading, variety of amenities, seating capacity, or landscaping on user behavior will deepen our understanding of these areas. This will enable the development of stronger, user-centric, and data-driven design decisions for planning and improving campus open spaces.

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