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Evaluation of Programming, Design and Construction Processes in Landscape Architecture in the Example of a Semi-Private Space

Peyzaj Mimarlığında Programlama, Tasarım ve Uygulama Süreçlerinin Yarı Özel Mekan Örneğinde Değerlendirilmesi

ABSTRACT

Urban open spaces are classified according to different functions as public, semi-public, semi-private and private spaces. Although the literature generally includes evaluations of public spaces, there is a lack of studies evaluating semi-private spaces. This research deals with the evaluation of open spaces after the conversion of a mansion into a library, as an example of a semi-private space. In this research, which is about the evaluation of the programming, design and construction processes of the landscape project prepared for the building environment that functions as a library, each stage is evaluated with examples. The design and construction process in landscape architecture consists of successive forward and feedback stages. The beginning of this phase is the programming phase. The programming phase is the analysis and synthesis phase where all data guiding the design are obtained, and the user group and their needs are determined. The better the data is analyzed at this stage, the higher the use of the space will be. After the programming phase, the design phase moves on and options are produced at this stage. The design process is a diversity reduction process. It is the process in which the best one is selected from the determined alternatives. After this stage, the application and usage phase begins. In this study, post-use evaluation data was not produced because the usage process had just begun. This research, evaluated on the example of a semi-private space, contains important data for landscape architects, users and employers.
Keywords: Design and construction process, sem-private space, from space to place

ÖZET

Kentsel açık mekanlar kamusal, yarı kamusal, yarı özel ve özel mekanlar olarak farklı işlevlere göre sınıflanmaktadır. Literatürde genellikle kamusal mekanlara yönelik değerlendirmeler yapılmasına karşı, yarı özel mekanları değerlendiren çalışmaların eksikliği vardır. Bu araştırma yarı özel mekan örneği olarak bir konağın kütüphaneye dönüştürülmesi sonrası açık mekanlarının değerlendirilmesini ele almaktadır. Kütüphane işlevi yüklenen yapı çevresi için hazırlanan peyzaj projesinin programlama, tasarım ve uygulama süreçlerinin değerlendirmesini konu alan bu araştırmada her aşama örnekleriyle beraber değerlendirilmiştir. Peyzaj mimarlığında tasarım ve uygulama süreci birbirini izleyen ileri ve geri beslemeli aşamalardan oluşmaktadır. Bu aşamanın başlangıcı programlama aşamasıdır. Programlama aşaması tasarımı yönlendirici tüm verilerin elde edildiği, kullanıcı grubu ve ihtiyaçlarının belirlendiği, analiz ve sentez aşamasıdır. Bu aşamada veriler ne kadar iyi analiz edilirse mekanın kullanımı da o kadar yüksek olacaktır. Programlama aşamasından sonra tasarım aşamasına geçilir ve bu aşamada seçenekler üretilir. Tasarım süreci bir çeşitlilik azaltım sürecidir. Belirlenen alternatiflerden en iyisinin seçildiği süreçtir. Bu aşamadan sonra uygulama ve kullanım aşamasına geçilir. Bu araştırmada kullanım sürecine yeni geçildiğinden dolayı kullanım sonrası değerlendirme verisi üretilmemiştir. Yarı özel mekan örneğinde değerlendirilen bu araştırma peyzaj mimarları, kullanıcılar ve işverenler açısından önemli veriler içermektedir.
Anahtar Kelimeler: Tasarım ve uygulama süreci, yarı özel mekan, mekanın yere dönüşümü

1. INTRODUCTION

Urban open spaces such as parks, gardens, plazas and nature reserves play a vital role in improving the quality of life of city residents. It benefits the city and its users in environmental, social, health and economic dimensions. Urban open spaces provide environmental benefits such as improving air quality, regulating climate, protecting biodiversity and water management. On the social dimension, it provides benefits such as community building, cultural features and recreation opportunities. In addition, it also provides health and economic benefits. Ensuring that these areas are accessible, safe, well-maintained and equipped with various features can significantly improve the quality of urban life.

Urban designer Jan Gehl has developed criteria for evaluating and designing urban open spaces that prioritize human scale and quality of life. He emphasized the importance of creating vibrant, safe, sustainable and healthy spaces. Gehl (2013)'s criteria for urban open spaces focus on creating human-centered environments, encouraging social interaction, promoting safety and comfort, and improving the overall quality of life. By prioritizing conservation, comfort, entertainment, sociability and sustainability, urban planners and designers can create vibrant and functional open spaces that meet the needs of diverse urban populations.

In the architectural literature, "space" is defined as the space that separates people from the environment to a certain extent and is suitable for actions to continue (Hasol, 1988). It is shaped according to the function within this space. According to the function they serve, they are divided into four categories: private - semi-private - semi-public - public (Newman, 1972). The distinction between private and public spaces in the city is very clear. In the Landscape Architecture literature, the area most subject to research within the scope of urban open spaces is public open spaces. However, research is limited in semi-private spaces, including courtyards and apartment buildings, where only certain people can enter. This research evaluated the garden of the library of a private teaching institution as an example of open space in Trabzon City. Therefore, in this research, which evaluates open space organization in the example of semi-private space, programming-design and construction processes are discussed.

1.1. Design and Construction Process of Educational Building Open Spaces

Nowadays, the content of education and training is as important as the programming and design of these places where students spend their time. When designing educational buildings and their environment, not only spaces where education, training, research and application functions take place, but also social and cultural activity spaces that ensure the individual and social development of students should also be designed (Özkan et al. 2017; Regular et al. 2018; Regular et al. .2019). These places are very important for students to meet each other in their extracurricular activities, to rest, relax and realize themselves. For this reason, when designing open spaces of educational buildings, spatial organizations that will allow more than one activity are important. In this research, the programming and design process of a library open space will be evaluated. In this context, first of all, it is necessary to explain what the design and construction process in landscape architecture is and what steps it consists of.

He stated that the design and construction process consists of five sequential forward and feedback steps. These are programming, design, application, use and post-use evaluation steps (Preiser et al., 1998; Preiser and Schramm 1997; Preiser 2001). First of all, in the programming step, all data guiding the design are collected. In this step, which begins with identifying the problem, needs are determined, all physical, cultural and perceptual data of the project area are examined, and surveys and analyzes are carried out. After this stage, the design phase begins. The option development process begins to seek answers to the problem identified during the design process. Among the options, the most appropriate project that responds to the problem is selected and the construction process begins. During the application process, manufacturing is carried out in accordance with the design, and then the resulting space meets the user. This stage is called the usage process. The designer approaches with a tendency to create innovation, while the user is conditioned by memory. As a result of the interaction between the designer, the user and the space, the user enters the process of evaluating the space. This stage is called post-use evaluation. This evaluation data then forms the input to the reprogramming data, and this process is continuous (Figure 1). The purpose of this research is to evaluate the spatial organization of the landscape project around the Library, which was designed and implemented.

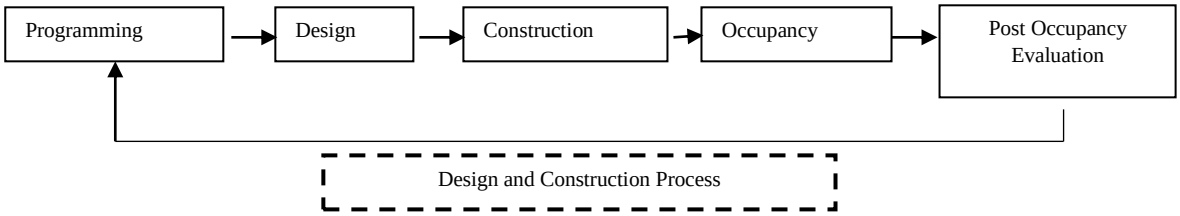

Figure 1. Design and Construction Process (Source Preiser and Nasar, 2008; Özkan et al. 2017)

2. MATERIAL AND METHODS

The material of the study consists of the historical Konak and its surroundings, located in the Ortahisar district of Trabzon city center (Figure 2). This area wanted to be re-functioned as a library structure by Artıbir Private Education Courses and accordingly, a landscaping project was prepared. The project surrounding the library was designed in 2022, its construction was completed in 2023 and usage started in the same year. The method of the research is to evaluate the design and construction stages of the landscape project.

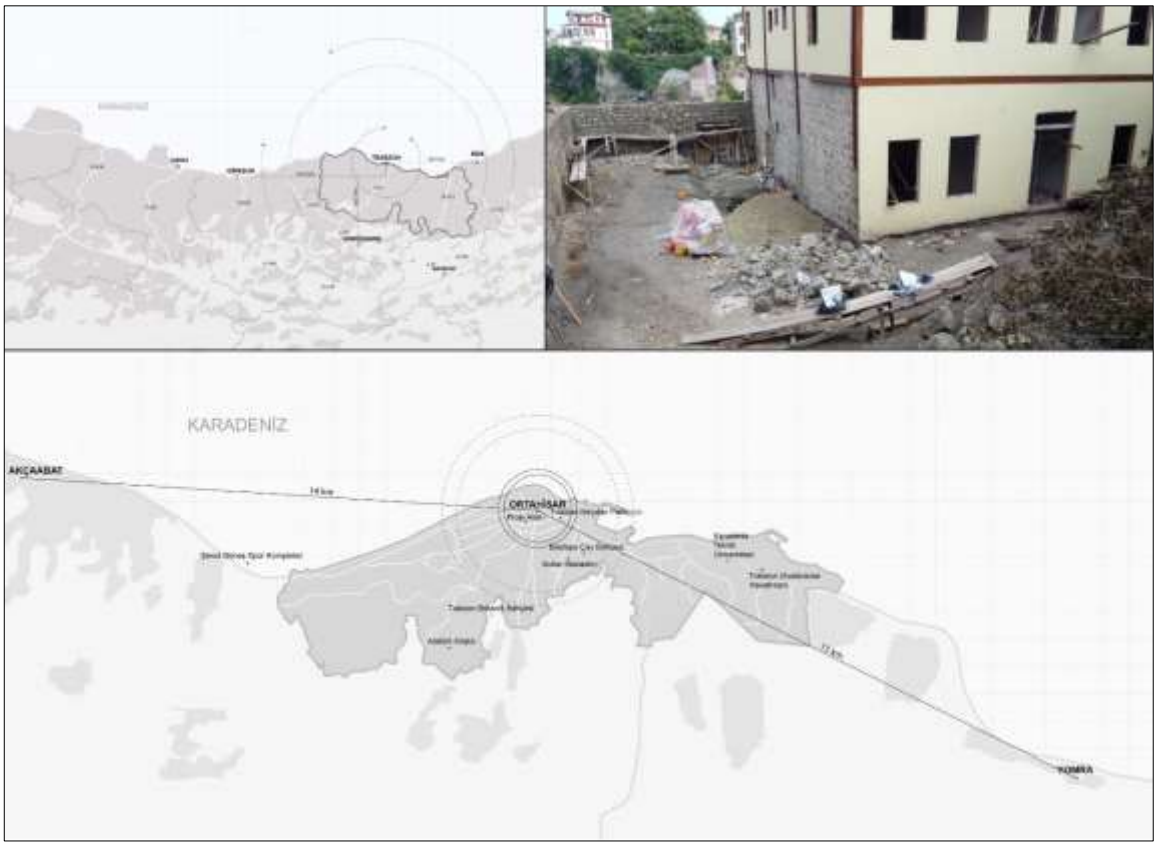

Figure 2. Location of study area and satellite image

3. LANDSCAPE DESIGN AND CONSTRUCTION PROCESSES OF THE HISTORICAL RESIDENCE SURROUNDINGS

3.1. Landscape Programming of Study Area

The programming phase is the phase where all data guiding the design is collected and evaluated. First of all, the building and the land around it, elevations, environmental boundaries, soil analysis, fountain etc. elements in the area were determined, and climatic data were analyzed. Afterwards, the needs of the 14-18 age group users were analyzed. After this analysis, all data was synthesized and the design problem was defined. The prominent evaluations after the analysis are as follows:

❖ The project area consists of two levels in elevation and there is an elevation difference of approximately 2.5m.

❖ The project area is problematic in terms of sun exposure. Especially in the winter months, it only sees the sun in the morning hours, while in the summer months it can see the sun until 15 :00.

❖ The soil in the project area is quite stony.

❖ The stones excavated from the project area were primarily considered to be used in the design.

❖ It is planned to design areas in the project area where students can spend time and come together in line with their needs.

❖ The project area is closed by walls on 4 sides. It was programmed to create a water element to evaluate this closure in a positive way (Figure 3).

Figure 3. Landscape programming and site analysis

3.2. Landscape Design of Study Area

As a result of the analysis and synthesis of the data obtained from the programming phase, the main design decisions were prepared, options were produced and the design project was finalized. Design is often a problem-solving process. It is the preparation of plans or diagrams required for a specific activity (Aksoy, 1975). In other words, it is a process of option reduction. Although design is a concrete result, the abstract nature of the process that leads the designer to this result cannot be ignored. The basis of design education should be on how the process will work, not on what the result should be. The creativity that emerges in this process has a cognitive structure and includes the stages of production and discovery (Smith et al., 1995; Özkan et al. 2016). The design process consists of several stages: bubble design, schmatic design, design development and construction drawing. Firstly, the functions were determined in the open spaces around the library building and then a construction drawing was prepared (Figure 4).

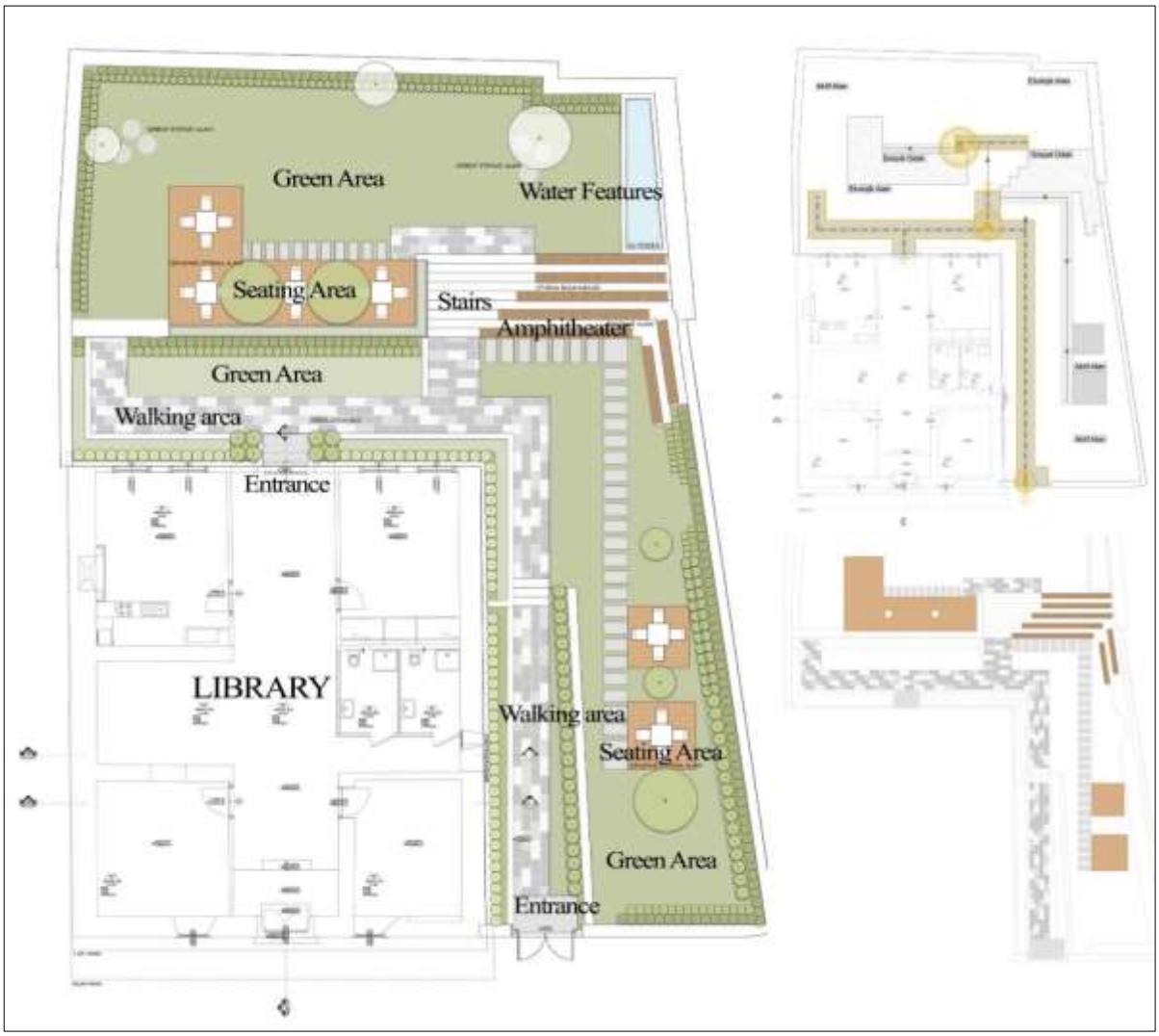

Figure 4. Landscape design process of this area

The 2D plan that emerged as a result of the design process was later supported by 3D explanations. Nowadays, with the advancement of technology, visual expressions in landscape architecture have become even more important. At the end of the scribbling and sketching process, 2D drawings are prepared in the AutoCad environment, and then visual thinking is supported by visual expression with 3D and Photoshop programs (Figure 5). After the preparation of the 3D visuals, presentations were made to the employer, the necessary revisions were completed and the construction phase began.

Figure 5. Presentation of 2D project with 3D visual

3.3. Construction and Occupancy Process of Study Area

The design process has been completed and the construction phase of the project has begun. During the construction process, primarily ground-site preparation, leveling works, elevation of the land and infrastructure works were carried out. In projects where survey and analysis studies have been successfully carried out, problems are minimized when moving from design to construction. In this project, the space organizations envisaged in the design phase were implemented in the same way.

Within the scope of infrastructure preparation, irrigation and drainage works have started and the electrical lighting infrastructure has been completed. Afterwards, ground tightening operations were carried out in the areas designated as hardscape, then concrete molds were prepared and the concrete was poured. Then, the coating of the floor stone was completed. On the other hand, the vegetal soils of the green areas, which we call softscape, were brought to the field. Then, the plant species determined in the project were brought to the project area and planted. Finally, the grass laying was completed and the area was ready for use (Figure 6).

This area, whose construction was completed in 2023, started to be used by students. In order for post-use evaluation data to be generated, students should be expected to use this area for at least 2 years.

Figure 6. Construction And Occupancy Process

4. DISCUSSION and CONCLUSION

The importance of semi-private spaces in city centers is quite high. In addition to urban open spaces, these semi-private spaces within the city should also be added to the city. Therefore, such restoration projects should be evaluated well. This project, which is about transforming the mansion into a library and transforming the mansion's surroundings into an open space, is also a good example of semi-private space organization.

The importance of semi-private spaces in city centers is quite high. In addition to urban open spaces, these semi-private spaces within the city also need to be brought to the city. Therefore, such restoration projects

should be evaluated carefully. This project, which is about transforming the mansion into a library and the surroundings of the mansion into a library open space, is a good example of semi-private space organization. This project was designed by the team including the corresponding author.

In this area, which has been reorganized in line with the needs of the students, places where students can carry out their extracurricular activities have been prioritized. In addition to students' needs for socialization, needs such as relaxation, rest, eating and drinking, and self-realization were also evaluated.

In this research, only the design and construction processes were evaluated within the scope of the landscape project, but post-occupancy evaluation data was not produced. Thus, it is only aimed to emphasize the importance of the project process. They are examples of good practice that interpret well-designed spaces today. In projects produced in the professional discipline of landscape architecture, each project develops with an idea, and the answer to the question 'what' is sought. This answer is clarified during the programming phase and then the answer to the question 'how' is sought. The answer to this question is clarified during the design process. After all this, a successful construction process must be carried out.

This research does not claim to reveal all the details of the design and construction processes in landscape architecture. It only examines the semi-private space example. As a result of this research, a post occupancy evaluation study can be carried out after the venue meets with its users. Since the lifespan of the landscape must be taken into account when designing the new spaces, it is important for the landscape to be long-lasting and sustainable in terms of preserving ecological values. Not enough time has passed yet for this data to be generated. This is among the limitations of the research.

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