

Relationship Between Visual Thinking and Visual Expression: Housing Environment Landscape Project Studio Experience

Görsel Düşünce ve Görsel Anlatım İlişkisi: Konut Çevresi Peyzaj Projesi Stüdyo Deneyimi

ABSTRACT

Landscape architecture is a discipline that creates spaces by considering the functional, aesthetic and semantic dimensions of the environment in line with human needs in the human-environment relationship. In the production of these spaces, the designer desires to create innovation and aims to present different designs for the user. The development of technology is constantly changing and developing landscape architecture education in terms of content and scope. In particular, the change in visualization technologies in the way students think is of great importance. This change can sometimes be positive and sometimes negative. It is stated that while it improves the creativity of the student, it sometimes limits it. This research did not focus on the effects of visual expression on creativity. This research aims to emphasize the importance of visual thinking and visual expression concepts in landscape architecture and to address these two concepts in the production of spaces within the scope of studio projects. In this context, the final projects of Studio 2 course in the education program of Karadeniz Technical University Landscape Architecture Department were evaluated. The visual thinking and visual expressions of the students were evaluated with the final sheets of residential environment landscape projects. In the final projects, the concept determined by the students, the visualization of this concept, the user group and activity list they determined, plans, sections and 3D visuals were evaluated.

Keywords: Visual thinking, Visual expression, Landscape architecture education

ÖZET

Peyzaj mimarlığı, insan-çevre ilişkisinde insanın ihtiyaçları doğrultusunda çevrenin işlevsel, estetik ve anlamsal boyutlarını göz önünde bulundurarak mekanlar yaratan bir disiplindir. Bu mekanların üretiminde tasarımcı yenilik yaratma arzusunda olup kullanıcı için birbirinden farklı tasarımlar ortaya koymayı hedeflemektedir. Teknolojinin gelişimi peyzaj mimarlığı eğitimini de içerik ve kapsam olarak sürekli değiştirmekte ve geliştirmektedir. Özellikle öğrencilerin düşünme biçiminde görselleştirme teknolojilerinin değişimi büyük öneme sahiptir. Bu değişim bazen olumlu bazen de olumsuz olabilmektedir. Öğrencinin yaratıcılığını geliştiriken bazen de sınırlandırdığı ifade edilmektedir. Bu araştırma görsel anlatımın yaratıcılık üzerindeki etkilerine odaklanmamıştır. Bu araştırma peyzaj mimarlığında görsel düşünce ve görsel anlatım kavramlarının önemini vurgulamak ve mekan üretiminde bu iki kavramı stüdyo projeleri kapsamında ele almayı amaçlamıştır. Bu kapsamda Karadeniz Teknik Üniversitesi Peyzaj Mimarlığı Bölümü eğitim programında Stüdyo 2 dersi sonuç ürünler değerlendirilmiştir. Öğrencilerin görsel düşünce ve görsel anlatımları konut çevresi peyzaj projeleri final paftaları ile değerlendirilmiştir. Final projelerinde öğrencilerin belirlemiş olduğu kavram, bu kavramın görselleştirilmesi, belirlemiş oldukları kullanıcı grubu ve etkinlik listesi, plan, kesit ve 3d görseller üzerinden değerlendirme yapılmıştır.

Anahtar Kelimeler: Görsel düşünce, Görsel anlatım, Peyzaj mimarlığı eğitimi

INTRODUCTION

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How to Cite This Article Özkan, D. G., Kuyumcuoğlu, D. A. & Özer, E. (2024). "Relationship Between Visual Thinking and Visual Expression: Housing Environment Landscape Project Studio Experience", Journal of Social, Humanities and Administrative Sciences, 10(6): 745-751. DOI: https://doi.org/10.5281/zenodo.14 249887

Arrival: 03 October 2024 Published: 30 November 2024

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This journal is an open access, peer-reviewed international journal.

Nowadays, architectural disciplines are changing as well as needs. These changes are related to the continuity of human-environment interaction. Humans change their environment, and the environment changes human behavior. In addition to these changes, factors such as technological development, increasing mobility, and globalization are constantly changing and developing landscape architecture in terms of content and scope. With these changes, it has become one of the most diverse planning-design, repair and management fields, using art, science, architecture, engineering and technology together, as a mediator on the basis of protecting and managing human and physical environment, natural and cultural resources (Gül et al., 2009). The discipline of Landscape Architecture is also a multidisciplinary profession where these fields are carried out together.

Design education is very important in departments such as architecture, urban design, and landscape architecture. The images created during the design process, which is a mental process, become real when transferred to a material. Some graphic expression techniques such as drawing and modeling are used to transform images, that is, visual thought, into visual expression (Düzenli et al, 2017).

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Creativity and creative thinking, which are concepts that encompass all emotional and intellectual skills of humans, have come to the present day by undergoing a development process as deep-rooted as human history (Aiamy et al,2012; Michalko, 2011). For today's designers, being creative in every field, at every level, and at every point of design is an inevitable necessity. Creativity is defined as the process of "creating something new and unusual"(Čorak et al, 2019). Throughout this process, thought processes and personality traits such as following a different path, going beyond the norm, not hesitating to delve into the unknown, being able to see points that others cannot see in the relationships between ideas, and being open to innovations are emphasized (Öncü, 2003). Education is very important in the discipline of landscape architecture, where visual thinking and visual expression come to the fore and these two concepts are in constant interaction with each other. Within the scope of this research, the relationship between visual thinking and visual expression in landscape architecture education will be examined in the sample of studio projects.

Landscape Architecture Education

The departments of architecture, urban design and landscape architecture aim to educate students who can think creatively, integrate creativity with analytical thinking, innovate and solve problems. Landscape architecture is a professional discipline that prepares original open space designs that provide different activities to meet user needs and requirements in different sizes and scales. Therefore, in landscape architecture education, it should be aimed to develop creative thinking in line with concepts from different disciplines. Students are expected to produce creative designs.

In Karadeniz Technical University (KTU) Department of Landscape Architecture, theoretical and practical studio courses, where one-to-one education is at the forefront, are very important in order to provide students with design and creativity skills (Özkan et al., 2016). Design studios create a productive environment that supports the creative process. A common atmosphere formed by sharing different ideas is reflected in the final product through visual thinking and visual expression. As a result, students are offered a creative working environment that supports their creativity. In this study, the Environmental Design Project 2 (EDP 2) course, where visual thinking and visual expression are at the forefront in the education of the Department of Landscape Architecture, was evaluated within this scope. For this reason, the concepts of visual thinking and visual expression need to be evaluated and their relationship with the design process needs to be determined.

Visual Thinking And Visual Expression in Landscape Architecture Education

Visual thinking is defined as a cognitive process that is created to generate ideas and create mental images for the solution of a design problem. Arnheim (2007) defines visual thinking as a way of thinking between seeing, imagining and drawing. According to Marie Deza and Deza (2009), visual thinking is the phenomenon of thinking through visual processing. The "visual processing" expressed in this definition can be defined as the ability to interpret visual information and use it to create new visuals. Visual expression is a way of expressing all these ideas with tools such as sketches, diagrams, abstractions or models.

Both skills are essential in landscape architecture education because they enhance students' spatial awareness, creativity, and ability to clearly communicate complex spatial ideas. Visual thinking in landscape architecture education fosters students' creativity and spatial production, which are essential for conceptualizing sustainable and functional outdoor designs. Visual expression bridges the gap between abstract ideas and practical applications by enabling students to effectively translate their ideas into user-friendly forms (Stanimirovic et al, 2023). Modern programs in landscape architecture often combine both skills with digital tools and hands-on activities to foster innovative problem solving and collaborative learning. This approach not only improves student engagement, but also aligns with sustainable design principles by encouraging a deep understanding of spatial relationships and environmental contexts.

There is a constant interaction between visual thinking and visual expression. The designer concretizes the ideas they have produced through visual thinking with visual expression and creates new expressions by rethinking the resulting product. This process continues continuously. The relationship between these two phenomena is very important for the development of creativity in the design process. Therefore, as long as these concepts, which are considered as two separate systems, are operated together, the design process reaches maturity.

This research aims to examine the KTU Landscape Architecture Studio 2 studies, which deal with the relationship between visual thinking and visual expression, concept generation and abstractions in landscape architecture design education, plan-section and 3D model expressions. In line with these acceptances, in the KTU landscape architecture 2nd year education, the visual expressions in the final sheets of the students were examined after they reached the creative original product.

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MATERIAL AND METHOD

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In this study, the research examples of the 3rd Semester "Housing Landscape" student projects (EDP II) of the Department of Landscape Architecture of KTU and the final product design project's Concept Production, Abstractions, Plan, Section and 3D models were used as materials. The students who were given a house on a 3000 m² land and plot were asked to design the housing environment. First of all, the students analyzed the housing users they determined and the needs of those users and created an activity list. The projects of 4 students who created the spatial organizations of these activities were selected and evaluated. The concept presented in the 4 sheets that constitute the main material of the study, the visualization of the concept, plan, section and 3D expressions were examined. These final products created by completing the design process consisting of 16 weeks were evaluated.

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FINDINGS AND DISCUSSION

In the findings section, 4 selected student projects were evaluated in terms of creative original products (plan-section and 3D visuals) and visual thoughts and visual expressions were evaluated. First of all, the users and concepts determined by the students were expressed and the visual expressions for the activity spaces of the designs created for these concepts were evaluated.

Findings of Project No.1

Work No. 1 belongs to a student named Caner Altın (Figure 1). In this project, the student focused on the concepts of minimal, contrast and creativity. He defined his user as a graphic designer and wanted to create a balance between art and nature. In this context, while the exhibition areas were the focus of the design, spaces for other activities such as sunbathing, viewing, eating and swimming were also designed. He designed a terrace in his design and opened the lower and upper levels of this terrace to use. He created the lower floor of the terrace for art exhibitions. The plans, sections and 3D visuals for open space organizations are presented in Figure 1.



Figure 1: Visual expression of study no. 1 Source: By the auther

Findings of Project No.2

The study number 2 belongs to a student named Melek Fidan (Figure 2). In this project, the student focused on the concept of curiosity. In this direction, she determined the sub-concepts of research and observation. She defined the user group as a journalist interested in astronomy. This user observes and photographs movements in space at certain intervals. She designed spaces where she exhibits these photographs and holds meetings with her journalist friends.



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The visual representations of the student who designed a parking lot, food and beverage areas, sunbathing area, infinity area, exhibition areas, observation areas, and barbecue area are presented in Figure 2.



Figure 2: Visual expression of study no. 2 Source: By the auther

Findings of Project No.3

Work number 3 belongs to a student named Hale Hatay (Figure 3). In this project, the student focused on the concepts of inspiration, creativity and art. She defined the user group as painters. In this context, she created her scenarios and determined the activity list. She used terracing in the formation of the land in order to design a semi-open space where the user would paint. In the design process that goes from whole to part, the final product includes spaces such as a parking lot, food and beverage, fire pit, meeting and gathering areas - pool, painting exhibition and design workshop. The explanation consisting of concept production, abstraction, plan, section and 3D visuals is presented in Figure 3.





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Findings of Project No.4

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The study number 4 belongs to the student Serkan Demirkan (Figure 4). In this project, the student focused on the concept of functionality. He determined the user group as Chef. Accordingly, he created the scenario and activity lists. The main activity area was determined as an open kitchen. Since the owner of the house focused on gastronomy, cooking and presentation areas were designed. In this context, he also designed an edible garden and aimed to use the edible plants he grew in this area in his kitchen. He made terraces by taking advantage of the elevation differences in the land to create an open kitchen and tasting areas. This terrace also formed the cover of the open kitchen. In addition, he designed a pool, an open kitchen, a gastronomy tasting area, meeting-gathering centers-food and beverage areas, and viewing terraces in the area. Visual explanations for these designs are presented in Figure 4.

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Figure 4: Visual expression of study no. 4 Source: By the auther

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CONCLUSION

The educational process for the discipline of Landscape Architecture, which aims to create spaces that respond to the needs and requirements of the user, is still a matter of debate today. As in all disciplines that include design and creativity processes, the style and methods aimed at providing students with design and creativity skills are very important in Landscape Architecture education programs (Özkan et al.2016; Düzenli et al, 2017). This study did not focus on teaching methods that will provide students with design and creativity skills. This study focused on examining students' concept production, user group definitions, space productions and expressing these productions through visual narration. It is seen that each of the students determined activities for different concepts and user groups and created spatial organizations that allowed these activities to take place. They were all asked to use a common language for visual narration and to create this through abstractions in general. The aims and results obtained with the study distinguish the study from other studies describing the design education process. This study, which examined the studio studies of 2nd year students of Karadeniz Technical University Landscape Architecture Department, focused only on visual narrations. This study did not focus on design processes.

The development of technology has significantly affected the visual expression process for landscape architecture students by expanding the tools, methods, and perspectives available to them (Bartelse et al. 2024). Advanced digital tools such as 3D modeling software, virtual and augmented reality allow students to analyze and visualize their designs with greater precision and depth (Li et al. 2018). This technological change has enabled landscape architecture students to create representations that more accurately reflect their design skills and explain how projects will perform over time. In particular, 3D representations and virtual reality allow for an experimental understanding of space that differs from traditional 2D visual representations and offers new possibilities for analyzing and interacting with designed spaces. All of these enhance students' options for conceptualizing, visualizing, and communicating their designs. Overall, technology has transformed the landscape architecture educational environment, taking students' visual thinking and visual expression processes to a different dimension. These tools not only support students in creating more dynamic and responsive designs, but also enable them to be better prepared to deal with the complex, technology-driven challenges of contemporary landscape architecture practices.

In landscape architecture, visual expression means that designers express spatial ideas through visual means. This process makes the characteristics of the place, the experiences of the users and the dynamics of nature understandable in landscape design. Especially with drawing, modeling and digital representation tools, the concepts in the mind of

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the designer are concretized; thus, the ideas become more understandable for the employers, the professionals they work with and the society. Visual expression plays an important role as a tool that strengthens communication from the design to the construction process in landscape architecture and ensures that the design is conveyed effectively.

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