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## **A Methodology of Transformation from Concept to form in Landscape Design**

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### **Abstract**

Design includes a process that is shaped by concept and form. The quality of this process is different in terms of designers' imagination, research, possibilities and user expectancy. For this reason, approaches that best respond to expectations and transfer them in the best way are important instead of one correct understanding in design. In particular, the results obtained in the design in different forms depending on the solution approach of the products, the designer's perception, perspective, experience and creativity. There are different methods used in design studies to achieve the final product. Conversion from one concept to the other is very common. Inspired by the first phase, the concept forms the soul and contributes to the formation of the space. The transformation from concept to form is one of the most effective methods of adding spirit to the land, revealing the identity of space, showing aesthetic, function, and sometimes special meaning to users. Because concept and form are the most important steps in the design of the relationship and the creation of the essential spirit. It is observed that this method is used in landscape designs as well as in all design disciplines. In this study, KTU Landscape Architecture Department 2017-2018 envisages the process of transitioning from concept to form of products and products that emerged under Environmental Design Project-2, in which second-year students are required to take a course. Within the scope of the course, the transition from the concept to the form of the project works carried out with eight students was phased in and the success of the design process was demonstrated with this method. It has been determined that many students seeking the same probing response have obtained end products that have no connection with each other at the end of the term.

**Keywords:** Design method, Aesthetic, Form, Landscape design.

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## Introduction

The cities formed by the desire of the people to live collectively from the past to the present are the areas where the land use is the most concentrated according to the need and desire of the people (Korkut et al. 2017). The planning of the open green spaces has become more important in the urban phenomenon planned through the planning of the structural areas over time. The open spaces formed by the positioning of the constructions are designed as green spaces allowing the use such as parks, green roads, sites and residential gardens. The outdoor space designs are works done by the landscape architects.

The landscape architects create healthy spaces for urban use by making effective designs that keep the functional, aesthetic and ecological functions in the forefront. The landscape design which is carried out without harming the environment is the process of designing the spaces with aesthetic and ideal solutions. During the design process, all the inventories belonging to the area to be designed are obtained and the possibilities of using the space are determined. Although different alternatives can be developed in order to achieve the final product, the pre-design of the details of the chosen main design are also created (Kempenaar, 2018).

The landscape designs are shaped by considering the topography of the area to be designed, the structural elements on it, the desires of the users if there is any and the functionality of the area (Düzenli et al., 2017). The shape and function of the space is very influential in the design of the space. Apart from these, the aesthetic appearance of the space and the different landscape images to be seen in the future are among the items to be considered (Kempenaar, et al. 2016).

The concept is the most important starting points of the designers in the space design. The concept is very effective in the shaping of the design and in having a meaning. The meaning of concept which is opinion, understanding, style and order is a word coming from French to Turkish. It refers to an abstract design that allows the creation of an idea or object in the human mind. The concept determined by the designer is a method used to convey the basic lines of the final design to the users. Therefore the designers use a concept to be able to reflect their ideas in their works. The concept directly influences the life style of the users of the space to be designed and shapes their expectations (Aydın and Ter, 2008). The ideas and lines occurring during the process of design reflect the character and purpose of the design through the influence of the concept (Reid, 1993).

The designer's experience, perception and approach to the issue are very important in determining and shaping the concept (Acar and Bekar, 2017). As the concept which varies from designer to designer can be formed through imagination, as well as it can be obtained after the field and literature studies performed on the area to be designed. The concept is the most important starting point used in revealing the soul, aim and the unique character of the design. A unique identity is given to the design by gaining soul for it.

Lines are used in the reflection of the concepts to the spaces and these lines create the form. In other words, the form occurs when the concept is shaped. The form expresses the visual characteristics of the beings such as natural-artificial, organic-inorganic, plain-moving, symmetric- asymmetric. The effect of the visual properties increases the perception of form more with the elements such as colour, size, texture and light (Erdoğan, 2017). In this way, surprising and effective spaces can be created through a balanced formal design. The use of the design principles when the forms are brought together increases the perception level of the form. The design principles enable the forms to be brought together and the composition to be formed in the most appropriate way (Öztuna, 2007).

The forms reflecting the concepts in the project work should be associated with the space to be designed. In this way, the concept becomes a form through the form and space planning by creating an aesthetic and functional balance. In design, a concept without a form or a form without a concept may not be used appropriately for its purpose. The non-conceptual forms can be evaluated as aimless although the concept gains meaning by being shaped by the form. The designers have to plan the relation between the users and

the concept well in order to create a space where the concept exists together with the form, because the ideas turn into physical form after the concept.

The decisions taken in the design and the planned ideas create the form by being shaped during the process of transforming a concept into a form. Properties such as materials, colour, and texture are used for the perception of the forms and for gaining diversity. There are many places throughout the world that turned into a form through a concept used in many countries for design. One of the most noteworthy among these is the Halprin fountains in San Francisco. This fountain which was shaped as broken square cylinder form and was situated on the fault line of the city was designed in order to demonstrate how the city could change after the earthquake. It also helps to remind the people of the chaos and the destroyed factories of the city. In the Zen gardens the rocks and sand reflect the magnificent balance of the nature by symbolizing the islands- mountains and the sea-waves.

From the past up to the present many of the architects including Frank Lloyd Wright in the 50's, Frank Gehry in the 60's, Tadao Ando in the 70's, Aldo Rossi in the 80's and Martha Schwatz, Roberto Burle Marx, James Corner, Zaha Hadid in the 90's used the perception of transition from concept to form and led the landscape architects and designers either with their concepts or with their ideas. In the search for new forms, the concepts are transformed into form with the inspiration from the nature, with the inclusion of natural materials and with more ecological, dynamic, living, harmonious and intelligent approaches (Düzenli et al., 2018, Pouya et al., 2016).

The components that characterize the city are the buildings, streets, open green spaces and their relationship with each other. The urban open green spaces are the most important areas that improve the ecological conditions of the city as well as they provide an interaction between the urban people and the nature. Besides these, it appears that the green areas are used in the urban areas due to the functional features including restriction, shadowing, providing privacy and guidance. The green spaces which are very important for the cities are considered as a sign of civilization (Gül and Küçük 2001). In the cities, that green area that the people are accustomed to see in large areas such as parks, street forestation, urban forests are located in different scales ranging from the single houses to mass housing. In addition to these, green areas are also intensively planned in public spaces such as hospitals, schools and institutional gardens.

Today's conditions direct people towards individual housing where they can stay closer to the nature, far away from the intense and stressful life of the cities and which can provide easy interaction with the nature. Individual residential gardens are the most ideal areas where the family members can reach the green space. Therefore, great importance should be given to the design of the residential surroundings such as to the design of the urban green spaces and the designs should be carried out without ignoring the desires of the users. It should not be forgotten that the most important factors in the design of the residential garden are the needs and lifestyle of the users and the expectations towards the house. The activities in the garden and the used equipment are the most important elements reflecting the lifestyle and desires of the users. The number of the family members, the age and gender of the members, the lifestyle of the family (open-closed to socialization), the level of income and the socio-cultural status are very important factors in the formation of the residential surroundings. Depending on these, the expectation of the users towards the residential surroundings are directly related to the social and cultural factors (Zorlu and Sağsöz 2010; Gür, 2000). Besides these, it should be accepted that beside being the owner of a house, having a house with a garden is an important status indicator (Karasu, 2005). It should not be forgotten that a house in good quality ensures the happiness and peace of the user. The residences and residential gardens which are related to visual, functional and economic values are influential in the user's search and satisfaction. Different desires of the different users involve processes that differentiate the meaning of a house and bring it into a multi-dimensional situation. While the design is being carried out, it should not be forgotten that the house and its surroundings will be the living space of the users and that it will be a place reflecting

the life style and character of the users. At the same time, it is a place with emotional relations (Kellekci and Berkoz 2006). For this reason, the interaction between the house, garden and spatial composition is directly related to the user's profile and willingness. The change of the expectations also causes a change in the spatial composition. The expectation of a painter and the expectation of an athlete towards the residential garden often differ, because the needs, desires and expectations are shaped by the profile, age, occupation and even by the hobbies of the user.

During the process of the landscape design education project courses are being carried out by giving different scales and study subjects to the students from the first year till the fourth year in each semester. During this education process, the study subject and the area where it will be realized are determined. It is preferred to have a concrete rather than an abstract study area. In addition to the user's requests the focus is on the development of the design stages by staying connected to the geographical data of the area. Initially, survey, analysis and synthesis studies of the identified area are carried out. The strength and weaknesses, threats and opportunities of the area are identified. Scenarios for the study field are created on the basis of the obtained information, number and profile of the users. In these scenarios the process of reaching the final products is improved by asking the students to find a concept to lead them. The chosen concept can be the product of the student's own imagination or it can be determined by the location, climate, vegetation and water resources of the study areas as well as by the cultural values such as the history, customs and traditions of the area. The chosen concept is quite influential in the transformation of the selected concept to the form of lines. The formation of the form and the attainment of a conclusion is accomplished by many suggestions. When these suggestions are made, the activity areas related to the scenario and the relations between these activity areas are examined. The selected form is edited by considering the sizes of the space. The final product is reached by developing a project on the form selected among the created suggestions.

Within the scope of this study the project products of the second grade students of the Karadeniz Technical University (KTU) Landscape Architecture Department which were designed within the scope of the Environmental Design Project-II course and the transition process of these products from the concept to form were examined within a method. The project course was carried out with eight students under the supervision of the academic member. At the end of the semester eight different projects were obtained in relation with the study area. At the beginning of the course, the user profiles of the projects were determined then the concepts appropriate to the scenarios were developed. These determined concepts were transformed into forms through many stages during the 4-month course. The relationship between the concept and form which is one of the most important parts of the design was the most impressive part of the student's education process. In addition, it can be said that this process was difficult for them because transformation process between the concept and the form was also a transformation from the abstract to the concrete concept. This method applied within the scope of the study facilitated the student's access to the form. During the process they were asked to create scenarios regarding their concepts and to find examples related top these scenarios. The example which expressed the concept the best among the given examples were selected and phased. The studies were examined during the fall semester. As a result, the transformation of the concept into a form were examined and evaluated within a method.

## **Study Area and the Method**

### **Study Area**

It was considered that the villa selected to be the study area was close to the city center but it was located within the nature. For this reason, the Cirav villas were chosen as the study area, these villas were located in Trabzon Yalincak between the 40°58'51.58" latitude and the 39°49'45.43" longitude (Figure 1). There were a total of 5 villas in the area. Within the scope of the project, the students were asked to design one

villa located within the study area (Figure 2). The total area of the villa's garden to be designed was approximately 873 square meters, and all these were located within a 3626 square meters area. The villas which had a view to the sea had 5 bedrooms, 2 living rooms, 3 bedrooms and 1 kitchen. The concept of the designed villa, the requirement list and the configuration were related to the imagination of the student and the present data of the area.



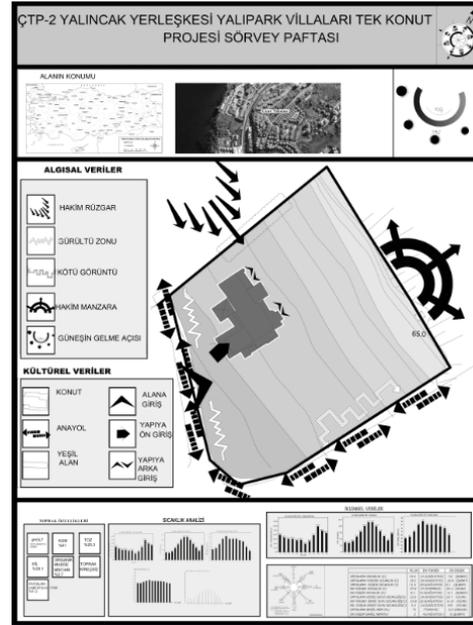
Figure 1. Study Area



Figure 2. Photos related to the Project Area

## Method

The study includes the contents and applications of the Environmental Design Project-II (EDP2) course in the Landscape Architecture Department of the Karadeniz Technical University. The main topic of the course was the realization of a landscape project related to a single residence surrounding. In this process, it was aimed to suggest various activities depending on the determined user profile and to carry out appropriate space solutions for these activities. The EDP2 course was carried out by 7 faculty members and lecturers by involving 8-10 students into each group. This study was conducted by evaluating the projects belonging to a study group of the fall semester's EDP2 course. Within the scope of the project course, the students were given a real estate that was not a fictional product. Within the extent of the course the students went to the field and made observations and detections. These studies were supported with surveys during the semester (Figure 3). After the surveys conducted in relation with the field, the students were asked to create a user profile, a scenario and a requirement list for this profile. The students who implemented all these were requested to find a concept and shape examples regarding this concept in accordance with the users' desires. The part which constituted the final stage of the process was about the transition from the concept to the form. The activities that were defined together with the relationship between the concept and the form related to each student are given in Table 1.



**Figure 3.** Survey study of the study area

The concept of the first example was determined as dynamism. The meaning of the term dynamism was very effective in the creation of the design fiction. A form was sought by examining concepts such as dynamic, lively and mobility. A dynamic form was revealed by combining the movable and non-fixed asymmetrical parts of the shape examples together. The concept of dynamism was turned into moving forms. At the same time the fact that the user of the house was a national athlete and enjoyed mobility and vitality led the designer towards the concept of dynamism. In line with the sketches which were made during the whole design process, the transition from the concept to the form was phased (Table1, No:1).

The concept of the second study was eternity. The fact that the users were interested in diving and described this sport as “the path to eternity” led the designer to this concept. The student who tried to reflect the concept of infinity through water and pool sought for character samples about the inner structure of water. The tissue formed by the combination of the droplets caused the concept to be shaped with rounded forms. As a result of the phases, forms expressing water droplets were created. The transportation networks which ensured the distribution to the places and formed the main circulation were designed to support this form. As a result the concept was transformed into forms that express the internal structure of the water and the droplets (Table 1, No: 2).

The fact that the user was a musician led the designer to find a sample that reflects the rhythm in the third example’s formation of concept and form. The harmony between the notes revealed the concept of having similar items in terms of form by reflecting the order in the formation of the rhythm. The transformation of the rhythm concept into form was created with the harmonic repetition of the similar form combinations. The transportation flow divided into sub-circulations was designed as rhythmical arms in the form of dancing human figure. The identified form was fictionalised in rhythmic pieces following each other and the similar activity areas were designed to be close to each other (Table 1, No:3).

The concept of the fourth study was identified as peace. A painter who finds peace by painting was considered to be the user and rectangular and square canvas forms were used to reflect the concept. Especially, the painting created by the famous painter Mondrian in the style of De Stijl was a guide to the designer how the rectangular and square forms followed each other. In order to avoid the one-to-one similarities with the De Stijl style, the designer created different orders to change the order of the forms. The sizes of the forms varied according to the nature of the activities to be performed in the spaces. The position of the colours on the pallet were indicative for the arrival of the forms (Table 1, No:4).

The concept of energy was used for the fifth example. The designer considered a user profile that reflected the energy by dancing. The asymmetrical lines within the dance were used to express the energy. The energy which was the starting point of the scenario, and the energy that became meaningful through dance were transformed into form in dance. The fact that the users were young people put the break and hip-hop dances to the forefront. The designer researched the character union examples that reflected the characteristics of these dances. The sharp body shapes created by the hand-arm, leg-foot and torso in these dances led the designer to samples affected by more formal geometric forms. For this reason, an abstract example was found that kept the triangular forms at the forefront and the energy concept was transformed into forms (Table 1, No:5).

The concept set for the sixth study was entertainment. The fact that the house users did sport actively led the designer to search for moving and dynamic forms. Since there were many individuals living within the house, the focus was concentrated on multipart forms among the many different options. A character example was detected that reflected the feeling of enthusiasm that was aroused by the concept of entertainment in the person. Besides creating different sport spaces for each individual in the house there were also spaces created that could be used together. The relation between the spaces were transferred into consecutive geometric forms after being abstracted (Table 1, No:6).

Sustainability was used as a concept in the seventh study. The fact that the user was nature-friendly and made designs associated with nature associated the study with this concept. In order to contribute to sustainability by promoting the function of the pollen garden and the bees in the ecosystem the designer was directed to the form of the honeycomb. Different abstract examples that were suitable to the honeycomb tissue were researched. The capacities of the activities made the size of the spaces clear in the design where the hexagonal forms were kept in the forefront. Podium, cocktail and exhibition areas were created in order to exhibit the products prepared by emulating from the nature and to hold fashion shows at certain times. Within the process the concept of sustainability was reflected in the hexagonal forms (Table 1, No: 7).

The concept of the last study was intersection. The designer who chose a crowded family as the user group instead of a core family focused on the fact that the concept of family consisted of intersections and wanted to define the concept with forms intersecting each other. Spaces appropriate to strengthen the interaction between the family members and to bring the different generations to common event were designed in areas intersecting the cross-space relations. Starting from this scenario, the intersection of the activities led to the formation of the forms. The lines intersecting with the amorphous lines of the arc form were effective in the transformation of the concept into form. During the whole process, the transformation of the intersection concept into form was phased (Table 1, No:8).

During the project process, the students created concepts and scenarios appropriate for the user profiles. While the forms appropriate to these concepts were revealed, great importance were given to the use of the design elements and principles. The student's works were followed throughout the process and the transformation of the concept into the form was followed stage by stage by making instructions at the necessary stages.

**Table 1.** Drawings of the projects transformed from concept to form

<b>No: 1</b>	<b>Concept:</b> Dynamism	<b>Student:</b> Sevda ŞEN
<b>No: 2</b>	<b>Concept:</b> Eternity	<b>Student:</b> Büşra AYTEK
<b>No: 3</b>	<b>Concept:</b> Rhythm	<b>Student:</b> Mustafa PAMUKÇU
<b>No: 4</b>	<b>Concept:</b> Peace	<b>Student:</b> Büşra YILDIRIM
<b>No: 5</b>	<b>Concept:</b> Energy	<b>Student:</b> Gonca İSKENDEROĞLU
<b>No: 6</b>	<b>Concept:</b> Entertainment	<b>Student:</b> Mecit Rüzgar ALTEKİN



criterion for success is included within the method of the study and consists of the combination of concept, form requirement and desire. These steps which were followed throughout the whole process were revealed with the model products at the end of the study. The model obtained at the end of the semester; demonstrate the reflection of the determined concept on the selected area. The transformation of the concept into form during the project process can be also evaluated by the occupational disciplines such as interior architecture and architecture, because these occupational disciplines also appeal to the users and have the same idea. Within this process there are changes occurring in the concept and form according to the occupations. As long as the applied methods are carried out according to the other disciplines, the results of the professions can also be compared. Each of the eight studies that emerged as a result of the study was shaped by a unique concept. The unlike formation of eight work which have identical process and seek response to same problem vary according to the students' own ideas. It is because the design has endless answers. The success of this process, which is not a single line, has developed in proportion to the way in which the conceptualization of steps towards form has been carried out correctly. At the same time, before the design started, each student saw the land and did some fixing work. In line with these studies, project papers including survey, analysis and synthesis evaluations of the area have been established. The formation of these bases, which constitute the preliminary steps of the design, is realized in the same way in all the project courses every semester in the four years education process. However, the process covered in this study includes the process of shaping with the concept form after these phases. In other words, this shaping processes the process of taking shape and the example of the steps and concepts. In the course of the training, the students who easily overcome the process of determining the existing data are in a difficulty to turn the concept into into form. The concept is an abstract concept, and the idea of transferring it to paper is the most challenging stages of the process. This transition process shows that students can easily reach the top with this method. This method includes a concept that can serve user requests, and examples that reflect this concept, including transforming the final instance into forms in stages. Making it easier for students to work and helping them achieve their goals. In the process, step by step conceptual style was delivered and spaces were created in accordance with the activities. It is envisaged that this method applied within the scope of the study can be applied in many professional disciplines, especially landscape architecture. As a result of all this process; the importance of obedience to the users' requests, the way of thinking with the idea, the expansion of this idea concept, and the monitoring of the transformation of the concept into form.

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