Designing a Space for Documentary Filmmakers with Design Thinking Method

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Abstract: Design education is based on the act of designing. Design education is based on the process, not the outcome. In this process-focused education, it is necessary to use methods that can generate creative and innovative solutions. Design thinking is one such method. This method is also used in spatial design, in addition to music, literature, science and education. In this study the design thinking method was used. This method aims to put the student at the centre of the process by increasing the creativity and abstract thinking skills of students taking studio education. The study was conducted with 10 students taking the studio course. The students were given the topic "Space Design for Documentary Filmmakers". The study was carried out in five stages over a period of 12 weeks: empathising, defining, generating ideas, developing prototypes and testing. The students' stage of development in the process was monitored through the resulting work. It was ensured that the students developed different perspectives throughout the process, without disengaging from the work. The importance of creating a concept for the design of space and the ability to think in three dimensions in accordance with the concept has been understood in design education. Based on this study, it is believed that the use of methods that enhance the creative thinking of those receiving design education will provide different perspectives and develop creative three-dimensional thinking.

Keywords: Design thinking, Interior architecture, Interior design, Documentary.

1. Introduction
The rapid changes in the social, cultural, economic and technological fields are affecting the thinking system and learning styles in our country as well as in the whole world. It is observed that the changes that occur due to this effect are also experienced in the field of education and design education, which aims to teach how to produce more identity and qualified design outputs. All these changes have put on the agenda how to reveal the creative thinking ability of individuals, which is one of the important issues in design education.

In the educational process where traditional learning/teaching methods are used in design education, it limits the creativity of individuals due to the lack of different perspectives at a sufficient level. As a result, not enough original designs are produced. Creativity, which is one of the most important elements of design education, has revealed both more original design ideas and a process in which the

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individual discovers himself/herself, overcomes his/her limitations, breaks the usual assumptions and does not use rote techniques. For this reason, it has been observed that in the spaces where design education takes place, creative thinking emerges through the use of several different approaches and methods, and the resulting products are more qualified. The design-oriented thinking model, used as a method in design education, provides more creative results by providing different perspectives to students receiving design education.

In this study, students were asked to watch documentaries specific to their field of interest in order to introduce the subject for documentary filmmakers. The thematic and spatial characteristics of the documentaries watched were collectively discussed in the workshop environment. Through an online interview with the documentary filmmaker 'Mustafa Aslan', the students were informed about documentary filming and living spaces through the eyes of a documentary filmmaker. Then, by analysing this information, the students were asked to determine the type of documentary, the location where the documentary would be filmed and the number of people for the design concept. The students are expected to design a living space for documentary filmmakers using the design thinking method. Two small (300*600 cm) and one large (300*900 cm) containers were given to the students to create different shapes according to the concepts defined by the students. The students' creativity was analysed and guided for improvement through various readings on the resulting shapes and the spatial requirements determined according to their concepts. By interviewing a documentary filmmaker and using the design thinking method, the aim was to empathise with the students in designing a space and to identify threats and opportunities. The design-led research model used in the study was applied to interior design education and its impact on the originality and creativity of student projects was investigated. It is hoped that the findings of this study will enable students to stay on the project track throughout the 12-week course and produce original projects. It is also hoped that it will help design educators to monitor and improve students' project development process.

2. Design Education
The word design is of Latin origin and means 'to give form, to represent' (Eyüboğlu Erşen, 2018). Design is defined by TDK (Turkish Language Association) as 'the form and imagination visualised in the mind'. According to the philosophical approach of TDK, design is 'the copy of an object or event that is perceived beforehand and then concretised in the mind' (Yurtgün & Çınar, 2023). According to Hasol (1995), design is defined as the creation, design, draft, the written form of an object, the shaping of the object. According to Çınar and Çınar (2018), the shaping that is visualised in the brain with the first information is design. Tunalı (2021) defines design as a thought (idea) planned to solve a problem. A designer is a person who combines his/her skills with imagination and presents the object created in his/her mind as a product (Noraslı & Çınar, 2024). The designer's cultural background, genetic predispositions, knowledge, problem determination and problem solving skills are all transformed into creativity (Er Bıyıklı & Aksoy Gülen, 2018).

While design disciplines gain identity with the experiences that have multiplied from the past to the present, they are rapidly changing and developing today thanks to the design and production techniques that are specialised and personalised with the solutions they produce for the difficulties encountered (Sungur & Akçaova, 2024). Architectural design is not only about teaching the necessary skills and technical knowledge, but also about how an individual should work on a subject or problem and how to approach the subject or problem. Design education is necessary to enable individuals to think, define, associate, apply knowledge and work in a changing environment. In the design process, it is necessary to learn to wonder, imagine, observe, research and evaluate existing evidence in order to critically and creatively approach problems and find alternative solutions. The design process is fundamentally cognitive and involves

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the idea of 'creativity'. It is the process of thinking creatively, producing new things, looking at objects or situations from a different perspective and acquiring skills, and this process can be acquired through design education (Besgen, 2015). Design education covers the act of designing and is shaped by the methods applied in this process (Yurtgün & Çınar, 2023). The aim here is to teach students how to design and how to reveal their own methods during design (Noraslı & Çınar, 2024). Design education is process-oriented rather than result-oriented (Aşkın, 2020). This process begins when design problems are encountered. During the process, the problem is transformed into a learning experience (Yurtgün & Çınar, 2023). Research on design education has explained that the creativity that emerges in the design process improves with the application of different experiential methods (Noraslı, 2023).

The element of creativity, expressed in all affective and intellectual activities, is a phenomenon that has been discussed for centuries. The concept of creativity is recognised as a phenomenon that many different disciplines such as philosophy, psychology, education, social sciences, fine arts and social sciences are trying to develop. The concept of creativity was only used as a phenomenon related to fine arts between the 15th and 19th centuries (Onur & Zorlu, 2017). At the beginning of the 21st century, scientific studies on the concept of creativity in the field of psychology began to be seen (Er Bıyıklı & Aksoy Gülen, 2018, p. 1275). Robinson (2003, pp. 84-86) defined the concept of creativity as the process of problem solving. Düzenli and Alpak (2016) defined creativity as the emergence of the new and unknown. Canaan (2003) defined creativity as an impulse. He emphasised that it means a strong driving force that challenges logic, an activity that gives designers an extraordinary sense of satisfaction and excitement, the origin of different ideas, products and designs, as well as the vision of seeing the world from a new perspective. According to Corbusier, creativity requires using all existing knowledge while being open to acquiring new knowledge, facts and experiments (Eyüboğlu Erşen, 2018). Efforts to develop creativity in design education, studies with different perspectives on creativity, and different opinions have been effective in the formation of differentiation in creativity theories.

Studies on the elements that reveal creativity and the factors that determine creativity have shown that there are different stages related to this subject. Wallas (1926) is one of the most prominent names in the first studies on the concept of creativity. According to Wallas (1926), there are four basic stages necessary for creativity. These are preparation, incubation, inspiration and verification. These stages have changed over time and more recently Harris (1959) defined these stages as six phases. These phases are: identification of need, gathering of information, effectiveness of thinking that processes this information, design of solutions, verification and implementation. In addition to approaches that evaluate the element of creativity according to a certain degree, there are also ideas that focus on certain components that make up creativity. According to Andreasen (2005), creativity has three components: individual, process and product. Firstly, creativity begins with the individual. Then, in creativity, which is a cognitive process, the individual investigates the problem or searches for a new idea and conceptualisation method by asking questions. When this process is completed, that is, when the existing problem is solved, the work with the answer is completed and a product emerges (Wallas, 1926; Harris, 1959; Andreasen, 2005, as cited in Er Bıyıklı & Aksoy Gülen, 2018).

The development of technology and science has revealed the need to use the phenomenon of creativity in design education over time. In this direction, great changes have taken place in design education and creativity has been effectively used in this process. With these changes, the understanding of education has been handled with a different method than the known method, and the information is not given directly to the students, but the students are taught how to access the information. In design education, creativity starts in the brain and is then observed in different dimensions. Therefore, in design education, a new process

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takes place in which students take responsibility and combine new knowledge and skills with previously learned knowledge. In this process, many different design methods have been used with a student-centred educational approach (Noraslı, 2023). According to Onur and Zorlu (2018), creativity is a very important element in design education. For this reason, different approaches and methods are used to reveal and develop creativity in the studios where design education is carried out.

Some of these methods, which play an important role in the development of creative thinking in design education, are designed to develop sensory awareness. The main aim of these methods is to develop creativity. At the same time, they focus on reasoning through critical and relational thinking by following a path consisting of both cognitive and affective strategies. According to Bulhaz and Bulhaz (2019), the main aim of design education is to reveal and develop creativity. Various methods are used to reveal students' creativity, and these methods aim to develop students' creative thinking and acquire the ability to think in three dimensions and create forms. With a similar view, Garip and Garip (2012) highlighted the importance of methods to reveal creative thinking in design education.

2.1. Concept Formation in Design Education
Every design contains a main idea (concept). Design and concept can never be considered separately, design and design concept are considered as a whole. The design concept is the main idea of a phenomenon that abstracts the concepts in memory and transforms them into an object, and at the same time provides the shape of the design. Determining the design concept during the design process is the most important stage of this process (Bielefeld & El Khouli, 2010). A good design can be produced by transferring each stage of the identified concept to the design. In addition, many factors such as the designer's talent, professional development and design education contribute to the creation of a good design. The design concept, also called the conceptual theme, is an element that sometimes represents function, sometimes light, colour, texture, material or

space. However, the design concept sometimes develops independently of the designer. This is a decision that is the responsibility of the designer. The design concept guides the designer to find the most appropriate solution where the designer gets stuck in the design process. If the designer encounters a problem in this process, he/she should not think independently of the concept and propose a solution. In this case, the concept provides the designer with possibilities for a solution (Eraslan Özdağ, 2018).

The architect or interior designer uses a number of methods and tools to develop the concept during the design process. Examples of these methods and tools include methods for expressing thoughts during the design process, and drawings and abstractions that allow the thoughts to become more concrete. The first of the methods used to develop the concept during design is 'brainstorming'. This helps to generate a large number of different ideas. Writing down the design ideas that come to mind during the design process is another way of finding a concept. Examining the area to be designed and analysing the environment contributes to the creation of the design concept. In addition, studying previously designed structures and seeing the architect's solutions for the structure increases the designer's ability to solve problems and helps to generate ideas. Another method of creating a concept is 'abstraction' in design. The abstraction method makes it easier to define the concept and increases the originality of the design. Sketching is an effective way to reveal the concept idea. At the end of all these methods and techniques, the design concept is determined. Subsequently, schematics, diagrams, mass models, modelling and animation are used to develop the concept and identify and develop the missing aspects of the design idea (Bielefeld & El Khouli, 2010).
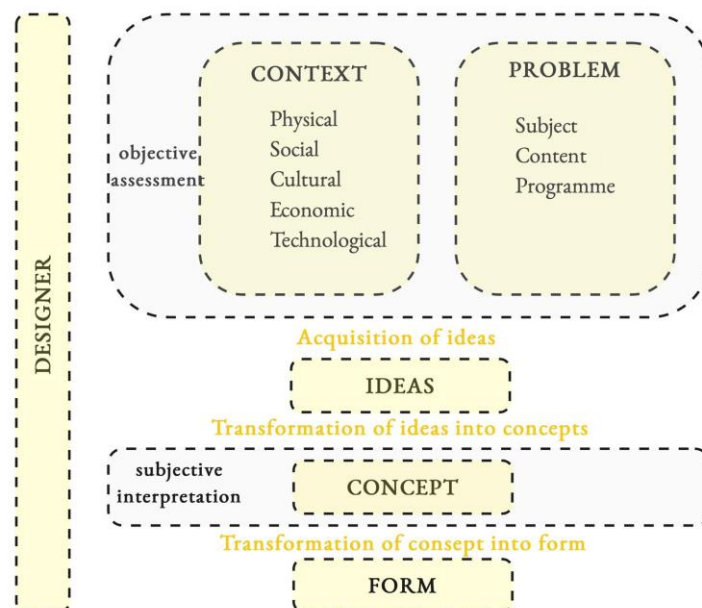
Every element that influences and is influenced by the design process is called a value (Onat, 2006). All the elements highlighted by Onat (2006) as values in the architectural design process make up the concept. These elements, which Onat (2006) describes as values and which also have an important place in concept

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formation, can be listed as subject-based values, architectural programme-based values, site/environmental-based values, investor/user-based values and designer-based values (Onat, 2006).

In the past, the concept was formed only in line with the general character of the building, independent of its location. Today, the concept has become abstract and is fed by context and content. The context here refers to the characteristics of the place, while the content is the design program and subject matter. In other words, while the concept was concerned with perfect geometry and perfect beauty in the past, today we can argue that it has changed by focusing on the problems in context and design and transforming these two elements into abstract ideas with the interpretation of the designer (Erman & Yılmaz, 2017, p. 103). According to Erman and Yılmaz (2017), the components of the concept are listed as problem, context and designer. The problem is generally defined as the subject and content of the project, functional requirements and conditions according to the design plan. The context includes natural and artificial environmental conditions, cultural and social conditions, as well as technological, economic and physical conditions. The designer component is the designer's experience, the designer's architectural style, knowledge, perception of the problem, perspective on problem solving and priorities, problem solving style are the qualities that the designer should have while creating the concept. The concept can also be formed by the designer's original thinking (Erman & Yılmaz, 2017).

Concept components usually drive the entire design process alone, and sometimes all concept components are included in the process. The interconnection of these components and the concept generation process model in architectural design is given in Figure 1. According to this model, problem and context elements are identified and concepts are developed. Concepts are elements that can be accessed by all designers without the need for interpretation. However, in order for the designer to create the concept by including his/her own interpretation, some determining elements are required. These elements are the designer's perception of the problem, the designer's style and the designer's experience. By interpreting the concepts with the designer's own views, each problem turns into original concepts with its own context. As the concept

Figure 1: Concept creation process model in architectural design (Erman & Yılmaz, 2017).

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transforms into form with the effect of the designer's interpretation, unique forms will be formed (Erman & Yılmaz, 2017).

All the above elements are very important for the creation of a concept in the design process in architectural education. The concept is a roadmap developed by the designer to find a solution to the design problem and is therefore included in the design process. The concept is not only part of the design discipline and architecture, but also appears in many different areas of everyday life. In this sense, the concept is seen as a phenomenon that makes the design unique and meaningful both in the field of architecture and design and in other different fields.

3. Design Thinking Method

The 21st century is a time of rapid advances in technology and science, and at the same time there is a need to develop students' abilities to respond to complex problems in education. These skills include collaboration, creativity, practical and analytical thinking. Students with independent thinking skills should not only be satisfied with content knowledge in order to find creative solutions to problems (Lipman, 2003). They should also be able to come up with original solutions to problems (Owen, 2007). Design thinking, which has an important place in the development of students' creativity, is used in many different studies as well as in education and training processes. Design thinking is a method that allows students to develop their critical thinking skills (Razzouk & Shute, 2012, pp. 340-342). The concept of design thinking, which was first discussed in 1987, has been widely used in studies since then (Owen, 2007; Brown, 2008; Ambrose & Harris, 2009). The interdisciplinary applicability of the design thinking method has received considerable attention (Dorst, 2010; Koh et al., 2015; Dolata & Schwabe, 2016; Liedtka, 2018; Noraslı & Çınar, 2024). It has been observed that design thinking is used with a multidisciplinary approach and different approaches at different levels of education from primary to postgraduate and in different fields (Pande & Bharathi, 2020; Rauth et al., 2010, pp. 2-3). This method provides creative solutions to

the needs and expectations of the current period with a result-oriented approach to problem solving (Noraslı & Çınar, 2024). It also puts the theoretical structure of thinking into practice. For this reason, design thinking is described as an effective tool that contributes to the development of students who produce products and solve problems that arise in design productivity (Girgin, 2020). With design thinking, problems are approached in a solution-oriented way, using intuition and imagination to achieve the desired results. In this way, design thinking contributes to the development of traits such as creativity, patience and personality (Razzouk & Shute, 2012).

Design processes always consist of recurring cycles of construction and reflection. These cycles take place in many stages. They include sketching, daily discussions with colleagues, case meetings, prototyping and client reviews. Design Thinking education is related to these cycles from the very beginning. Learning and knowledge creation in design thinking education is based on highly iterative processes. These processes have been compared to learning concepts such as experiential learning theory (Rauth et al., 2010, pp. 2-3).

In order to teach design thinking, institutes called d.school (Hasso Plattner Design Institute) were established first at Stanford University in 2005 and then at Postam University in 2007 (Rauth et al., 2010). These institutes gave students the opportunity to develop their creativity and experience in order to change their image (Noraslı & Çınar, 2024). The institute aims to create innovators rather than any innovation. In order to achieve this goal, d.schools recruited a group of teaching experts from different disciplines (Rauth et al., 2010). One of the important principles of d.schools is that the institutes offer design thinking education especially for traditional disciplines that do not have design education, such as business, law, medicine, social sciences and humanities (Dunne & Martin, 2006; Plattner et al., 2009). In Turkey, Boğaziçi University's entrepreneurship centre Bright collaborated with Stanford University

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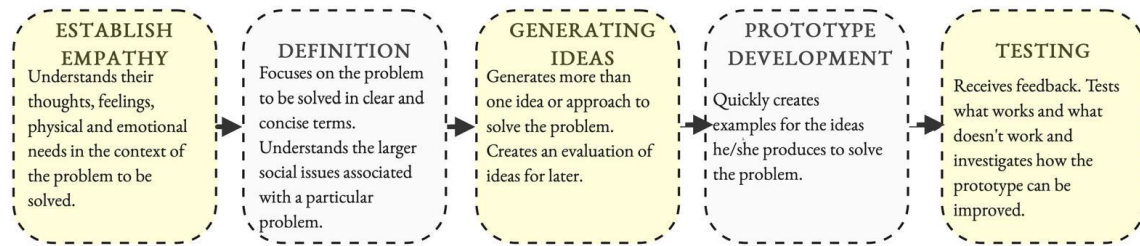
Figure 2: D'school design thinking method (Noraslı & Çınar, 2024).

d.school's University Innovation Fellows (UIF) programme in 2017. Through this collaboration, selected students from Boğaziçi University receive training in design thinking, creativity, innovation and business model development within the framework of UIF (University Innovation Fellowship Programme with Stanford d.school). Design thinking is a method that can be applied at different levels of education and in different fields. According to this method, design thinking consists of five basic steps, as shown in Figure 2. These steps are empathising, problem definition, idea, prototype and testing.

According to D'school, the design thinking model starts with problem identification. It then continues with the empathy phase. Empathy is gaining insight into the users and their needs. This stage is the understanding of a problem that needs to be solved through empathy. Empathy is very important for problem solving and a human-centred design process. Because it allows you to put aside your own thoughts about the problem you are trying to solve and get real ideas about the users' needs. At the same time, empathy helps us to understand the people we are designing for. The next stage is problem identification. This stage solves the identified problems, clarifies the situation and focuses on the design elements. Concrete and practical ideas are generated to solve the basic problem. In the idea generation phase, designers are ready to generate ideas. At this stage, designers brainstorm, sketch or physically perform something that enables the development of innovative solutions to generate new ideas. Another stage is the prototype stage. This is about finding the best possible solution to problems. It is the stage that involves building

something that will answer questions when tested. By the end of the prototype phase, the design team will have a better idea of the product's limitations and the problems it faces. In the final stage, designers test the product using the best solutions identified in the prototype stage. This provides feedback on the prototypes. As a result, the design thinking process is complete with all its stages (The Interaction Design Foundation [IDF]. 5 Stages of the Design Thinking Process (Interaction Design Foundation., 2020; Cantwell, 2019; Guncil, 2021; Noraslı, 2023). It has been found that students who use the design thinking method are more enthusiastic and active in this process, they progress faster in the design process and their learning outcomes are clearer (Assaf, 2009). Choi and Kim (2017) suggested that teaching and learning strategies should emphasise analogical and metaphorical reasoning to stimulate design thinking skills in students. Rauth et al.'s (2010) study goes beyond the use of design thinking as a pedagogy and focuses on how design creativity can be activated through design education. Oxman (2004) presents a pedagogical framework for design learning and teaching called 'Think-Maps' for teaching design thinking in design education.

Lindberg et al. (2010) consider the design thinking method as a meta-disciplinary concept. They investigated the methods of developing collaboration with meta-disciplines, and concluded that designers can easily discover their own skills through the experiential learning process of design thinking. Wrigley and Straker (2017) investigated the impact of the design thinking method on the learning performance of students in 51 different courses

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at 28 universities. As part of the study, Wrigley and Straker (2017) designed a project called 'Education Design Ladder'. This project was developed in 4 stages: product, project, business and professional. When the results obtained were analysed, it was found that design thinking is a very important method for identifying differences.

As a result, people have the skills needed for design. However, in order to have the ability to bring creative solutions to problems, the Design Thinking method should be used. In this context, it is clear that there is a direct relationship between design thinking and creativity. With the design-oriented thinking model, it is clearly understood that there is a noticeable increase in the potential of individuals to be creative day by day in design education.

4.Method

This study was conducted as part of the Interior Design Studio course taken by the first year students of the Department of Interior Architecture, Faculty of Fine Arts and Design, KTO Karatay University in the spring semester of 2023-2024. The methodology of the study was Design Thinking. In accordance with this method, the topic of "Living Space Design for Documentary Designers" was addressed. Two small (300cm*600cm) and one large (300cm*900cm) container plans were given to the students. The study was carried out with 10 students. The designs, created in accordance with the defined purpose and method, were carried out in a twelve-week process based on the stages of 'empathising, defining, generating ideas, developing prototypes and testing' that make up the Design Thinking method. The details of this process are shown in Figure 3.

Figure 3: Design process

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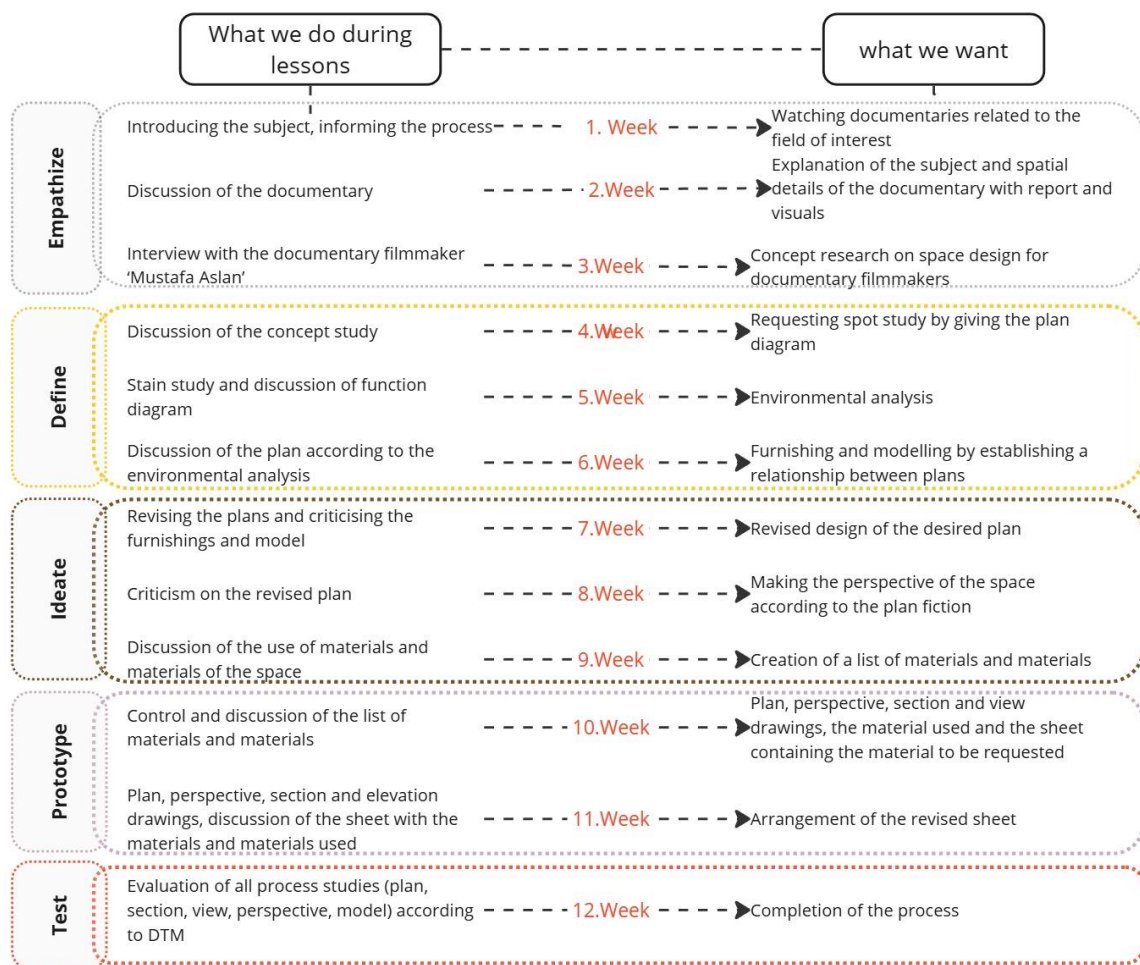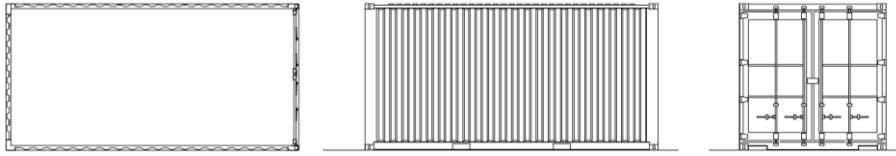
Figure 4: Container drawings

In this project, which was carried out according to the design-oriented thinking method, the fiction of bringing together the plans given to the students was formed by discussing them in the process. The plans, which consist of two small and one large container, consist of a total area of 81 m2. Drawings of the container are given in Figure 4.

5.Findings
This study was analysed according to the 'Design Thinking Method' stages of empathising, defining, generating ideas, developing prototypes and testing. The first stage, empathising, was processed in a three-week period.

5.1.Empathize
The first phase of the study was carried out over a period of three weeks. First, the students were introduced to the topic of designing a living space for documentary filmmakers. The students were asked to watch documentaries about their field of interest. According to the documentary they watched, the aim was to create spatial and fictional imagination. In the third week, as can be seen in Figure 5, an online meeting was held with Mustafa Aslan, who shot the documentary; the spatial needs of the documentary shooters, the effect of their location on the shooting area were discussed and an interview was conducted in the form of a mutual question and answer. According to the information obtained from the interview, they were asked to determine their own concepts for the next week.

Figure 5: Interview with filmmaker

5.2.Define
In line with the information obtained from the interview with Mustafa Aslan, the concept determined by the students according to the space design was discussed. Information such as the type of documentary, the number of people who will live in the container, the location where the documentary was filmed was created by the students. The created scenarios were discussed by the students and keywords were created and expressed with the word cloud method as shown in Figure 6. With the word cloud, the documentary types that will determine the concepts of the projects were collected and the data that will affect the design were defined. The documentary type, the number of people who will live in the container and the location where the documentary was filmed were used as a reference in determining the spatial needs of the user as a result of detailed research. The concept and the determined needs enabled the design of original functions and forms by providing the formation of the stain study and function scheme.
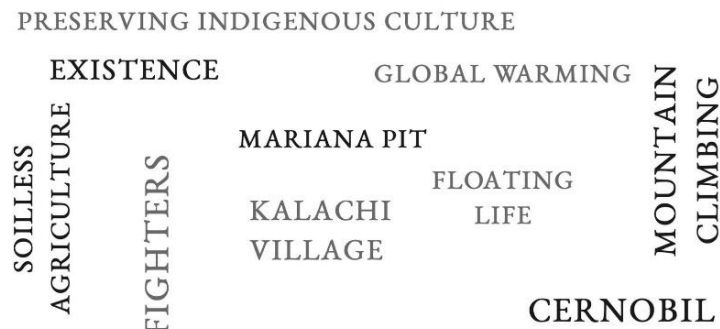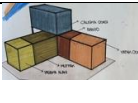
Figure 6: Word cloud
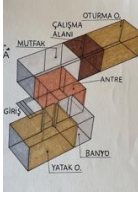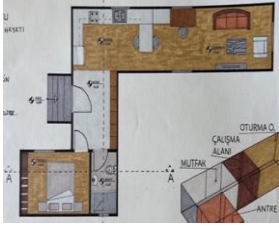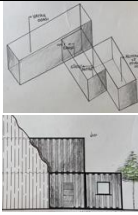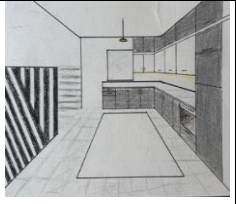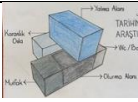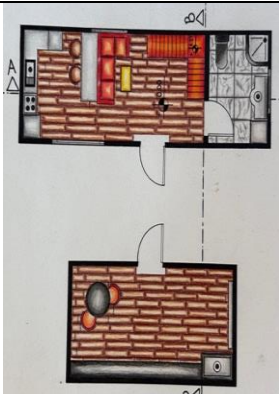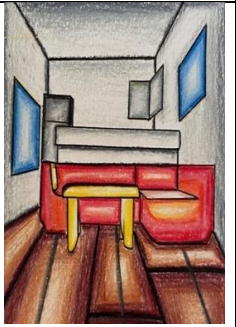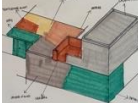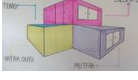
5.3.Ideate
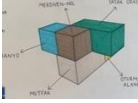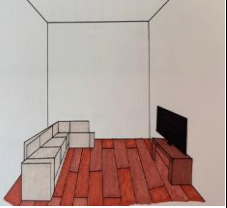
After the empathising and defining stages, the design phase was started in line with the spatial needs. The plan diagram, form and model of the project were made by the students. Forms were determined in the model according to spatial needs and at this stage, all actions were carried out in the name of generating ideas. The keywords determined by the students had an impact on the interior design and the material use of the space in concrete or abstract terms. In this context, it was observed that spatial needs changed according to the type of documentary chosen by the students, the number of living people and the location where the documentary would be filmed. In this context, as seen in Table 1, the projects produced by the students differed from each other in terms of ideas and original designs emerged.

Table 1: Concept, form, plan schemes and three dimensions of the projects

	CONCEPT	FORM	PLANS	3D
PROJECT 1	**FLOATING LIFE** 2 people Australia **Aim:** Studying the Coral Reef			
PROJECT 2	**HYDROPONIC AGRICULTURE** 2 Person Laboratory **Aim:** The stages of soilless agriculture			

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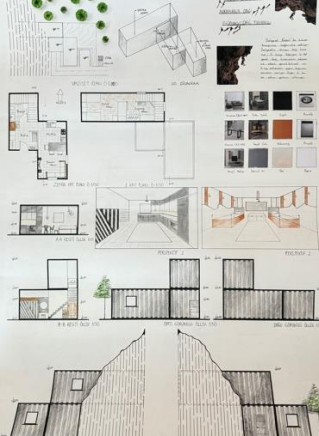|				
PROJECT 3	**FIGHTERS** 2 Person Russia **Aim:** To document the moments when fighters meet the audience			
PROJECT 4	**MOUNTAIN CLIMBER** 3 Person North Central Nepal **Aim:** Mountain climbing without equipment			
PROJECT 5	**EXISTENCE** 2 people Gobeklitepe **Aim:** To make a research documentary			
PROJECT 6	**CHERNOBYL** 2 Person Ukraine-Pripyat **City** **Aim:** To document the impact of a nuclear accident on the environment			
PROJECT 7	**MARIANA PIT** 2 Person Guam Island-Mariana Trench **Aim:** Investigation of the deepest known point on Earth			

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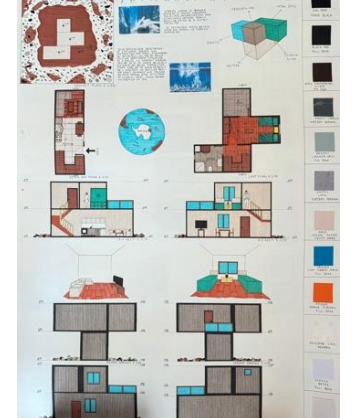
PROJECT 8	**GLOBAL WARMING** Antarctica 2 Person **Aim:** To investigate climate change and see its effects			
PROJECT 9	**KALACHI VILLAGE** Kazakhstan-Armola Province 3 Person **Aim:** To investigate the village with sleeping sickness			
PROJECT 10	**PROTECTING INDIGENOUS CULTURE** Australia 2 Person **Aim:** To investigate the real life of the Austrian Aborigines			

5.4.Prototype

The fourth phase, prototype development, comes after the idea generation phase. At this phase, the plans and other drawings made in the previous weeks represent the final state of the process. After the plan fiction was made depending on the concept, three-dimensional visuals formed the prototype of the design. Throughout the process, studio students searched for space design for documentary filmmakers, and with the concepts they developed, they also created materials and materials used in design. The students included all the data about the plan, section, view, three dimensions, concept, materials used in the space in the sheet. The sheets created by each student as a result of the process are given in Table 2. This section shows that studio students have different design ideas depending on the concept of the spaces designed for documentary filmers.

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Table 2: Concept design

Project 1	Project 2	Project 3

Project 4	Project 5	Project 6

Project 7	Project 8	Project 9

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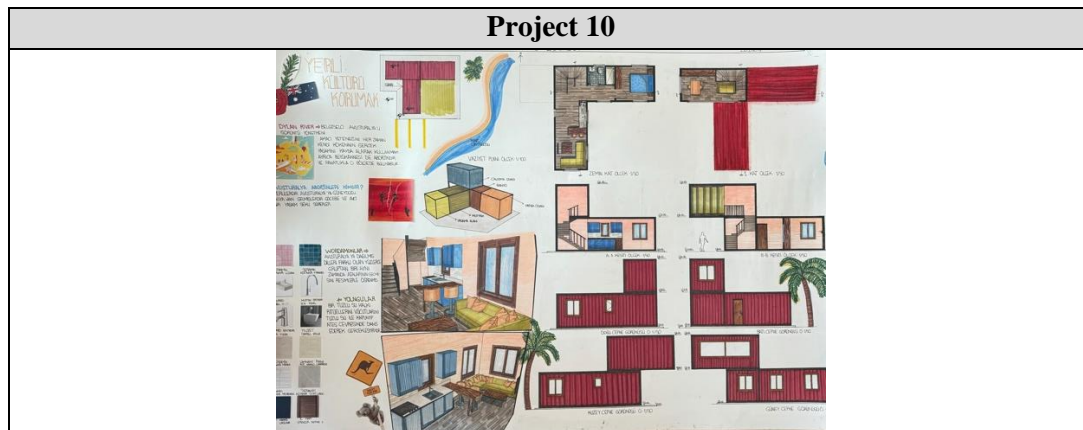
Project 10

5.5.Test

Testing constitutes the last stage of the design thinking method. During the 12-week project process, the works of 10 students were evaluated. According to this evaluation, the interview with Mustafa Aslan about space design for documentary filmmakers constituted the 'empathising' stage of the study. At this stage, the students questioned the spatial requirements of a documentary filmer in the living space and decided how the design space should be with the information they learnt from the interview.

In the defining stage, the design thinking part of the plan fiction was formed. In the idea generation phase, three-dimensional visuals were made together with the plan and other drawings and the materials used in the design were included. In the prototype development phase, it was observed that the design suitable for the concept was supported with drawings and the final version was created on the sheet.

According to the results of these stages, the students' research into the environments in which the documentaries were filmed and the interview with Mustafa Aslan enabled them to analyse the information they had researched through empathy. This process influenced the idea generation stage of the project. It was observed that the stage of identifying the locations of the documentaries and the number of people involved in the project was made more concrete by identifying different types of documentaries. The keyword cloud created by identifying the students' concepts increased the quality of the project and allowed for a more original definition of spatial needs. The fact that each student determined the form according to the project concept and designed the interior accordingly was reflected in the materials used and design ideas, resulting in personalised designs.

6. Discussion and Conclusion

In interior architecture education, transforming the design from a conceptual stage to a quality prototype stands out as one of the biggest challenges. Traditional methods used in design education are often insufficient to cope with this challenge. When modern approaches are not used or the process is not managed with a specific methodology, problems such as conceptual clarity in the design process, loss of meaning and form in abstraction, and difficulties in two and three dimensional expression of concepts may arise. Such problems negatively affect the concretisation of ideas and the quality of the final products. In order for designs to be completed smoothly, it is of great importance to manage the process with scientifically based methods. Design thinking stands out as one of the most effective approaches in this process.

Five stages of the design thinking method were used in this study: empathising, defining, generating ideas, developing prototypes and testing. In the first stage, the students researched the documentary genre they were interested in and the places where these documentaries were filmed caught the students' attention. An interview with Mustafa Aslan, who shot the documentary, enabled the students to empathise

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with the user of the space and formed the concept ideas for the project. In the second stage; the concept and the needs identified through the keywords created with the students' ideas enabled the design of original functions and forms by enabling the formation of a spot study and functional scheme. In the third stage; plans and three dimensions were created according to the defined concept. In the fourth stage; the final products were made with technical expressions in a specific discipline according to the concept. In the fifth stage, the qualities of the projects were analysed and tested.

It was observed that the designs produced as a result of this study were different from each other and developed in accordance with the concept determined at the beginning of the design process. Spatial requirements and materials used in interior designs varied according to the documentary type, location and the number of people using the space. Thus, it was ensured that original projects were produced. With the research method used, it was ensured that the students did not break away from the 12-week course process and designs with continuity emerged. The development of such techniques by applying methods similar to the design-oriented thinking model proven by scientific studies in design education improves project processes and quality. From this point of view, the use of design thinking method in design education is beneficial for educators and students who manage the process and its use is recommended.

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