



Developing a Design Approach from Scenario to Space in Interior Architecture Education via the Scamper Method: Christy Brown Example

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Abstract

This study aims to investigate the role of empathy in the disciplines of cinema and interior architecture, with a particular emphasis on individuals with disabilities. The objective is to assess the potential benefits of this empathetic approach through the learning outcomes derived from a workshop study. Workshops are recognized as effective educational tools, as they facilitate a discussion and evaluation environment that transcends conventional standards of interior architecture education. The primary focus of this research is to cultivate empathy and human-centred thinking skills, specifically through the application of the Scamper method in interior architecture design. This study aspires to provide students with opportunities for abstract and creative thinking while fostering innovative design approaches that integrate various disciplines.

The Scamper method is a technique designed to encourage creative thinking and to foster diverse perspectives in the design process. The method encompasses nine key steps: Substitute, Combine, Adapt, Modify, Minify, Magnify, Put to Another Use, Eliminate, and Reverse. It is assumed that the Scamper method will prove effective in the field of interior architecture design education by promoting a problem-oriented approach, enhancing abstract thinking, and cultivating empathy skills, particularly in the context of inclusive design. The objective of this study is to introduce an innovative educational framework for interior architecture design that prioritizes empathy and human-centred design. This approach incorporates the Scamper method within the curriculum, adopts an interdisciplinary perspective, and emphasizes the development of inclusive design practices. Additionally, the study seeks to improve abstract thinking skills in design processes and to explore experimental educational methodologies. It is anticipated that such multidisciplinary strategies and pedagogical innovations will significantly enhance the future of interior architecture design education.

Keywords: Design education, Design for the disabled, Empathy, Inclusive design, Scamper method.

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To cite this article: Yurtgün, H.Ö. (2025). Developing a Design Approach from Scenario to Space in Interior Architecture Education via the Scamper Method: Christy Brown Example. *ICONARP International Journal of Architecture and Planning*, 13 (1), 1-21. DOI: 10.15320/ICONARP.2025.313



INTRODUCTION

The definition of Interior Architecture, which is linked to creative and design-oriented thinking, is "a profession that generates solutions to offer the most suitable designs to the users according to functional, structural, and aesthetic criteria within an architectural space," as many theorists throughout history have attempted to explain" (URL-1). The profession of interior architecture aims to create design solutions that are functional, structural, and aesthetically pleasing within an architectural space, to cater to the needs of the users. This definition has been established by various theorists throughout history. Interior architecture is primarily concerned with designing spaces that are suitable for human needs and requirements, considering factors such as user type, function, comfort, ergonomics, and aesthetics.

The objective of this research is to analyse the disciplines of cinema and interior architecture through an empathy-driven approach, with a particular emphasis on individuals with disabilities. Furthermore, the study aims to assess the potential learning outcomes that may be achieved through a workshop designed around this approach. It is estimated that around 16% of the global population have disabilities, which means that one in every six individuals is disabled (URL-3). Generating diverse solution recommendations for those with disabilities whose physical makeup and level of disability differ will improve their quality of life by enabling them to carry on with their lives without requiring support. For disabled people to enjoy their human rights and fundamental freedoms on an equal basis with other users, interior designs—which should be based on reasonable arrangement and universal design criteria—must be taken into account (Mülayim, 2017). In recent years, the biggest issue in studies focused on individuals with disabilities is the designer's lack of experience regarding the needs of disabled individuals (Pehlivanoğlu, 2012). From the standpoint of people with disabilities, accessibility and a lack of responsiveness to needs are situations that have a significant impact on life comfort. The levels of accessibility, usability, and responsiveness to individual needs, along with compliance with anthropometric standards and aesthetic value of a space, vary not only according to physical disabilities but also based on other physical conditions. These conditions include impairments related to vision and hearing, learning disabilities, age (including both elderly and paediatric populations), and pregnancy.

A person's daily social and physical existence is fundamentally intertwined with the concept of space. The principal reason space serves as a critical component of architecture is its role in accommodating individuals. As noted by (Corbusier, 1993) in his interview with architecture students, architecture is a discipline that is dedicated to serving the individual and must respond thoughtfully to both material and intellectual needs. These needs constitute the primary focus areas of architectural practice. For an area to qualify as space, there must be an individual who defines and engages with that space. In other words, the

recognition of space is contingent upon the existence of individuals who perceive and experience their surroundings. Traditionally, society has understood the concept of space as a protective enclosure designed to safeguard individuals from external elements while facilitating daily activities. Nonetheless, space can be analysed through three distinct dialectics: perceived, designed, and experienced. The type of space that accommodates individuals within the built environment and addresses their needs is referred to as living space. Therefore, it is necessary to respond to the expectations of the living space such as refuge, security, privacy, function and aesthetics. Within this framework, the design process and design education necessitate examining the issue and potential solutions from every angle and analysing them from various viewpoints in compliance with the design standards for all.

When evaluated through the existing literature; it can be seen that workshops are types of instructions that will enhance learning by bolstering the traditional design education model. Numerous studies have examined the viability of workshops for information-age design education. Workshop studies, according to (Işır, 2022), are viewed as a working process where participants can collaborate to carry out experimental and interdisciplinary studies under the facilitator's supervision in a setting that will boost their motivation and creativity. (İnce & Işır Yarkataş, 2017) asserted that educational environments are crucial for the development of the competencies that designers are expected to possess in the information age. Nonetheless, it is important to note that formal education alone does not suffice to cultivate these essential qualities.

For this reason, it's critical that students regularly establish collaborative learning environments, particularly in the context of design education. Workshop studies also benefit the instructor in a variety of ways. To stay current, it is critical to monitor how user needs are evolving outside of the formal education system, and to assess those changes from various angles. Workshops have been a part of education with online education system in different fields during the pandemic in the world and in our country. Workshops are crucial for educators, according to (Cleaver, n.d.) because they help them gain a fresh perspective on the field of design, participate in the continuous design process by sharing with students, generate creative ideas in a group setting, and take part in the process of learning in a democratic and critical setting. The designer's field of observation encompasses the entire built environment that currently exists, according to (Yürekli & Yürekli, 2004). Therefore, the environment should be considered as an educational environment. Moving away from formal education, design training conducted outside of the educational process is regarded as an informal education model. Education models that allow for specialization in a predetermined subject and centre on it are known as informal education models. As a result, in terms of learning outcomes, informal educational structures like workshops aid in the design process. However, there exists a notable gap

in the literature concerning experiential workshops designed to foster empathy for individuals with disabilities. There are essentially two approaches to handling workshops, based on their purpose and organizational structure. The first group concentrates on a topic, concept or problem, and addresses a range of solution processes from simple to complex. The second group focuses on a single method of solution and will help with the production of solutions progressively and practically (İşir, 2022). From Scenario to Space Workshop was created to manage both kinds of applications in this particular context. The study is structured as follows.

Undergraduate design students were invited to participate in a workshop organized by the Interior Architecture Department of Seljuk University. The event, which employed the Scamper method, was announced through a poster detailing the workshop agenda. As a result of the open invitation, 35 students voluntarily registered for the workshop. The full-day session was conducted in small groups consisting of four to six participants each. The final products were evaluated through presentations made to the faculty members of the interior architecture department, utilizing presentation sheets to convey the learning outcomes.

This study aims to enhance students' creative thinking, empathy, and inclusive design skills by implementing innovative and collaborative learning methodologies in interior architecture education. The objective is to enable students to develop a design approach tailored for individuals with disabilities through an empathetic framework. This involves fostering an understanding of the diverse experiences of various user types based on their disabilities and engaging students in generating abstract concepts during discussions that arise from a selected film. Students will be encouraged to propose solutions that align with the specific needs, requests, and expectations of users, thereby adopting an inclusive design perspective through appropriate conceptual definitions. As such, it is anticipated that students will cultivate the ability to empathize, engage in abstract thinking, convert concepts into tangible ideas, participate in discussions, and articulate their design visions by crafting personalized layouts in a collaborative setting that extends beyond traditional educational paradigms.

The original contribution and significance of this study are rooted in the adaptation of the SCAMPER method to the domain of interior architecture, providing students with essential tools to enhance their design competencies. Additionally, workshop-style sessions facilitate both theoretical knowledge and practical experience, allowing students to address design challenges grounded in real-world contexts. This educational model promotes the development of innovative solutions through the integration of interdisciplinary perspectives throughout the design process. By prioritizing the needs of individuals with disabilities, this study seeks to improve designers' empathy skills and foster the creation of inclusive environments that can be accessed by all members

of society. Furthermore, the study addresses a critical gap within interior architecture education by promoting a curriculum centred on empathy and inclusive, human-centred design approaches. It contributes to the future of design education by exploring the potential of multidisciplinary methodologies and pedagogical innovations within the field of interior architecture. Consequently, this study presents a significant model for shaping the future landscape of design education.

INTERIOR ARCHITECTURE DESIGN WITH EMPATHY FOR DISABLED PEOPLE

Globally, the idea of designing for the disabled is regarded as a social responsibility. Numerous non-governmental organizations develop programs to assist people with disabilities in integrating into society and avoiding discrimination against them. They also propose creative projects to increase public awareness. The field of interior architecture, which primarily concentrates on people and their needs, has numerous responsibilities in this regard. Place is best described as "the space that separates people from the environment to a certain extent and is suitable for them to continue their actions." (URL-2). By analysing the components that make up the space and the overall user relationship, an area can be defined as a space. Because a person's space is an integral part of their physical and social everyday life, it should be able to satisfy needs for things like privacy, security, shelter, and aesthetics. Equal usage rights for a disabled person must be provided in space design that caters to the needs of a normal individual (Artün, 2018). A space doesn't meet design standards for everyone if it doesn't fulfil a purpose for everyone in an equitable manner. Addressing the psychological and social challenges faced by individuals with disabilities constitutes a professional responsibility rather than a mere preference. It is essential that design initiatives focus on developing solutions that effectively meet their physical needs and mitigate the obstacles they encounter in their daily lives. Rather than basing a product on standard human measurements and behaviours, the designer should create solutions that are appropriate for all user types to access and use (Hacıhasanoğlu, 2003). (Imrie, 2000), highlights that when designers consider the needs of people with disabilities in their work, they assess disability as a single movement disorder and reduce it to a wheelchair user. As per (Barnes, 2019), report on congenital visual impairment, the notion of cognitive impairment has not been broadened or accorded the same treatment as physical disability. Disability is often obscured within the interplay between the built environment and the surrounding context. In contemporary society, disability is predominantly perceived as a medical issue rather than an environmental concern. Consequently, the wheelchair—developed out of necessity—illustrates a nuanced social incompatibility, implying that such devices may serve to alleviate certain challenges associated with disability. (Guffey, n.d.).

Disability, as outlined by (Pinna et al., 2020), is not solely an issue that affects a limited segment of the population; rather, it is a phenomenon

that has implications for society as a whole and that individuals may encounter at various stages throughout their lives. The understanding of disability can be enhanced through the application of universal design principles, which acknowledge that this condition may arise at any point in a person's life and highlight its importance. Furthermore, it is essential for individuals to recognize that the process of aging will inevitably lead to some degree of physical, neurological, and psychological disabilities, irrespective of whether these impairments are the result of accidents or are inherent from birth.

With the right precautions in modern living environments, the physical, psychological, and social challenges that people with physical and cognitive disabilities face in trying to adapt to society can be eliminated. Still, according to (Morris, n.d.), comprehending an individual's-built environment requirements cannot be achieved only through understanding their disability circumstances. It also necessitates comprehending the requirements of the disabled person in light of their interactions and mobility restrictions within the built environment. Specifically, there is a cause-and-effect relationship between how physically disabled people use the built environment and how disabled they are. Living spaces must be managed with the same variability due to the differentiation of disability status and the need to privatize situations such as varying degrees of vision, hearing, movement limitation, and mental disability as much as possible. Currently, the most important thing is to ensure that people with disabilities do not experience marginalization in the built environment that has been tailored to their needs (Hacıhasanoğlu, 2003) states that healthy people respond differently to stimuli based on how they interpret their surroundings and experience them. Responses to stimuli within the built environment can manifest in various ways, including adaptation to the stimulus, experiencing discomfort, encountering challenges, seeking solutions, or maintaining neutrality. It is imperative to recognize that individuals with disabilities must invariably respond to the numerous obstacles they face in these environments. From this perspective, it becomes apparent that people with disabilities are constrained in their reactions during the stimulus-response interaction, which subsequently and detrimentally impacts their quality of life. This illustrates how the design process frequently simplifies the representation of individuals with disabilities to merely those who use wheelchairs. It is essential to comprehensively assess the diverse needs of individuals with disabilities, acknowledging the varying degrees and types of physical and mental impairments they may experience. Solutions that adhere to established design standards should be developed inclusively, ensuring that distinctions among individuals are eliminated in the final designs. Disregarding the needs of individuals with disabilities has frequently been a feature of the design and development of the built environment. (Barnes, 1991), asserts that designers frequently overlook the needs of people with disabilities and fail to take these needs into account during the design process. This

essentially results from not being able to fully anticipate the expectations due to ignorance of the disabled person's body, deficiency and behaviour. The designer's capacity for empathy needs to be highlighted for this.

By placing oneself in the other person's shoes, empathy is the effort to comprehend or experience the viewpoint, emotions, and thoughts of another person (Ersoy & Köşger, 2016). Everyone must communicate with others at all stages of life, including childhood and adulthood. Empathy is a talent that plays a significant role in enhancing interpersonal relationships. This significance has led to the inclusion of numerous structured training programs in the curriculum, particularly for young children, intending to develop empathy skills. The goal is to acquire sensory and cognitive skills that enhance the capacity for empathy (Ersoy & Köşger, 2016). Cognitive empathy ability happens when an individual first recognizes how they are different from the other person, and then, through internalizing the feeling, they are able to discern the other person's situation and emotion (Hoffman, 1984). The capacity to understand and respond emotionally to the feelings of others is known as emotional empathy (Thompson & Gullone, 2003). It takes time and a variety of lessons to develop both cognitive and affective empathy. When a person's empathy grows, they start to behave different from other people and are able to understand the value of life and the motivations behind other people's actions (Kaukiainen et al., 1999). For a designer, empathy encompasses the comprehension of an individual's thoughts, feelings, and both physical and emotional needs within the context of their challenges. This understanding is essential for developing effective solutions that address the specific problems faced by the individual (Noraslı, 2023). It will be possible for people, particularly in the design field, to create design strategies that adhere to design standards for all parties involved during the design process and to meet the needs of people with various kinds of disabilities by developing cognitive and sensory empathy with users. In the design process, this is less of a need and more of an absolute must.

Determining the expectations and needs of disabled people also requires involving them in the design process. An application study conducted in the works of (Merit et al., 2022), has shown why and how crucial it is for physically disabled users to participate in the architectural design process, as well as the reasons behind this lack of participation. The design remains merely an artistic and aesthetically pleasing concept if disabled users are not involved in the process. Architecture will always be referred to as a visual art rather than a physical art as long as it is recognized as a discipline (Bloomer & Moore, 1977). This situation demonstrates that, while maintaining an awareness of human needs in the physical environment, modernist design approaches must take into account impartiality and homogeneity as well as socio-spatial tendencies and practices in accordance with inclusive design elements.

(Shahrom & Zainol, 2015) assert that inclusive design is an idea that ought to be applied in the education of all parties, including the

manufacturer, user and designer. This includes reviewing the design process and assessing pre-existing designs. In light of this, the inclusive design ought to have several features, including being low effort, practical, flexible, useful, applicable, egalitarian, safe, low error tolerance, easy to use, perceptible and safe. Environments that satisfy the requirements and expectations of all groups, including those who are physically impaired, visually impaired, hearing impaired, sensory impaired, neurologically impaired, wear glasses, are pregnant, elderly, young, or have children, are examples of inclusive design. According to (Osman & Gibberd, 2008), societies are set and unchangeable, but individuals are malleable and flexible from a medical standpoint. From a social standpoint, it contends that prejudice and exclusion that individuals encounter are products of society and have nothing to do with their disabilities. It encourages the configuration of a non-segregating-built environment, which is consistent with the inclusive design focus. The opportunities an architectural space provides for a person are a good indicator of its quality. Creating architectural spaces that comply with universal design standards—such as providing equal opportunities, ensuring appropriate relationships between space and equipment, and incorporating structural features that are conducive to human use—can significantly enhance the inclusiveness of these environments (Arat, 2017).

Within the discipline of design education, inclusive design is viewed not as a static set of design standards but rather as an evolving philosophy. This comprehension is universally valued, irrespective of an individual's disability; it can be applied equitably; it is both practical and aesthetically pleasing; it can evolve and adapt with its users. Put differently, from the standpoint of the overall user group, it entails carrying what is appropriate for everyone in every circumstance and location (Persson et al., 2014). (Lamirande, 2022) claims that inclusive design features are employed to remove the disadvantages faced by the elderly and disabled. It is the designer's responsibility to resolve the complexity involved in adapting these design efforts so that groups deemed to be minorities can use them. Instead of creating band-aid fixes, the designer should be able to create environments that will help both healthy people and people with disabilities and other disadvantages. The designer must demonstrate proficiency in empathy and observation. Each design generated as a result of these competencies should be meticulously examined and evaluated. It is essential that the space or product created is of consistent quality and efficiency for all users. To effectively address the specific challenges that disadvantaged individuals may encounter, designers ought to develop designs that are visually distinct, consistently clear, simple yet aesthetically pleasing, well-balanced, and easily controllable. Additionally, it is essential to provide alternative options for access and usage. In this way, both the created space and the user will be positively affected. Inclusive design, as articulated by (Alhusban and Almshaqbeh 2023), signifies that spaces

must be inherently constructed to meet the diverse needs of all users, including individuals with disabilities, without necessitating alterations. This concept advocates for a built environment that is both accessible and functional, enabling individuals to navigate their surroundings without encountering barriers or requiring assistance. Promoting the social inclusion of people with disabilities is essential in the creation of such an accommodating environment, fostering a society that values diversity and equality.

MATERIAL AND METHOD

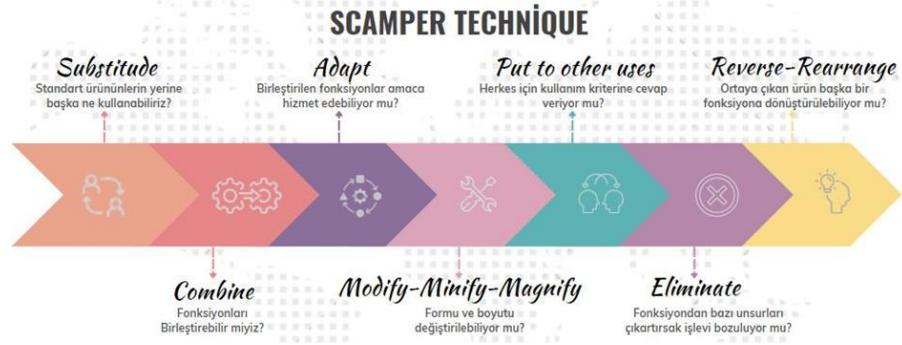
Research examining the needs of individuals with disabilities is continually expanding in contemporary society. Nevertheless, existing methodologies often fail to adequately address the diverse requirements of people with various disabilities. Current design approaches predominantly focus on a singular disability, which can lead to unfulfilled needs and substantially impact the comfort levels of those affected. This study considers the domains of interior architecture and cinema to elucidate the educational objectives of inclusive design and empathy, particularly through the implementation of a workshop experience. The Scamper method involves a series of steps designed to shape the design elements that will be presented in the workshop. It consists of asking questions to address a problem or considering various aspects of an opportunity. In 1953, Alex Osborn made the initial proposal for the Scamper method. Bob Eberle later used it to investigate children's perception, creativity, and imagination (Serrat, 2017).

The Scamper technique is recognized in the literature as an effective method for fostering creative thinking and developing innovative solutions across various disciplines. This method has proven to yield innovative and functional outcomes in areas such as product design, industrial design, education, architecture, and marketing. According to (Serrat, 2017), the SCAMPER technique plays a significant role in design and creativity processes, particularly within the product design framework. It facilitates creative thinking, enhances existing products, and generates innovative solutions. (Serrat, 2017) further asserts that the SCAMPER method possesses the capacity to produce more unconventional and innovative solutions when compared to traditional approaches to problem-solving. When employed as a cognitive strategy, it serves to guide designers in the pursuit of creative solutions. (Hassan, 2023) conducted a study with students from the Graphic Design Department at the Faculty of Design and Art, emphasizing the crucial role of idea generation through the SCAMPER method. The study highlighted this method as a means to cultivate the creative potential of students. Findings indicated that applying the SCAMPER technique in design activities positively influences graphic design students and provides a systematic approach that significantly enhances the idea-generation process in a structured manner. In a study conducted by (Aydın İ. and Çilci N., 2020) during the 2018-2019 academic year, students in the 5th and 6th grades participated in a six-week examination as part of a

Turkish language course. The study included both experimental and control groups, which were tasked with creating a new text based on a free reading sample derived from their textbooks. Statistical analysis of the collected data indicated significant differences in creativity, with the experimental group demonstrating superior quality in the texts produced compared to their control group counterparts. (Suh, S., 2019) aimed to formulate questions that enhance the effectiveness of the SCAMPER method in fostering creativity within the realm of fashion design. Given that the fashion design process encompasses multiple stages, including concept development, material selection, and colour planning, the study emphasized the formulation of queries particularly focused on design sketches and sample development processes. This methodological approach enables fashion designers and students to generate broader and more impactful creative ideas. (Perez J.E., 2024) sought to introduce an innovative management model aimed at enhancing capabilities within product and business processes. The research asserted that a coffee company could achieve significant improvements in its product offerings and organizational structure by integrating predictive collective intelligence strategies along with the SCAMPER technique. The findings suggested that this combined approach effectively contributed to sustainability and innovation within the evaluated companies. (Boonpracha, J., 2023) explored the creative idea generation processes of students engaged in product design utilizing the SCAMPER technique. Throughout an eight-week design activity, evidence demonstrated that the SCAMPER technique significantly facilitated the generation of creative solutions to existing product challenges. The results were assessed based on four components indicative of creativity: efficiency, flexibility, originality, and detail, thus affirming the technique's efficacy in nurturing creative idea generation among participants. (Özyaprak et al., 2019) structured their investigation around a design and story-writing task developed by the authors themselves. They established a training program that integrated SCAMPER and self-regulated learning techniques, applied to both experimental and control groups. The evaluation of results focused on fluency, originality, innovation, flexibility, elaboration, and workability. The data indicated that self-regulated learning constitutes an effective method for enhancing creative thinking and proficiency in utilizing the SCAMPER technique.

The SCAMPER method is underpinned by various research studies that emphasize innovation, product development, design, education, and other creative sectors. This method entails a structured approach that incorporates a series of inquiries organized into seven distinct steps, facilitating the development of a subject, problem, or product. Each letter in the acronym S-C-A-M-P-E-R represents a unique creative thinking strategy, which contributes to a systematic approach in the creative process (Figure 1.).

Figure 1. Scamper Technique Flow Chart



- ✓ **Substitute**: What other products can be substituted for standard ones? What else, for instance, could be utilized in place of a work area and a typical bed unit?
- ✓ **Combine**: Does the product have the ability to combine? Can various functions be used together, for instance?
- ✓ **Adapt**: Can the combined functions accomplish the intended goals?
- ✓ **Modify, Minify, Magnify**: Is it possible to alter the product's shape and dimensions?
- ✓ **Put to other uses**: does it adhere to inclusive and universal design principles?
- ✓ **Eliminate**: Will the product's functionality be compromised if certain components are removed?
- ✓ **Reverse, Rearrange**: Can the resulting product be converted to another function?

This study aims to involve students in a collaborative learning process by employing the SCAMPER method, which is frequently utilized in various educational programs today, within the context of interior architecture. This methodology is designed to enhance students' creative thinking and problem-solving capabilities while simultaneously fostering the development of innovative solutions through teamwork. During the workshop, students will be presented with a series of questions aligned with the steps of the SCAMPER method, specifically customized for the modules developed to address Christy Brown's requirements. This approach will facilitate students in generating creative solutions during the product design phase by guiding them to provide thoughtful responses to the relevant questions outlined below.

Creative Idea Development Process with Scamper Technique

From Scenario-to-Space workshop, which is intended for undergraduate students in Selçuk University's interior architecture department, covers the relationship between inclusive design and empathy within the framework of the Scamper method as well as how to interpret design by adopting a fresh viewpoint.

The movie 'My Left Foot', which chronicles the real-life story of Christy Brown, who has multiple disabilities and can only use his left foot due to congenital cerebral palsy, served as the inspiration for the workshop. The workshop was conducted in three stages. The first stage involved a brief interview followed by a presentation on the topics of disability, including

what it is, what needs disabled people have, and how we can better understand them (Figure 2.).



Figure 2. Workshop idea development process

At this stage, the design students were made aware that individuals with disabilities represent a significant segment of society, comprising 16%. By emphasizing the challenges that this group encounters in the physical environment, the goal was to foster awareness that an essential objective of design is to enhance the quality of life for people with disabilities. In the second phase, participants watched the Christy Brown biographical film "My Left Foot" in a workshop setting. Christy Brown's autobiographical film conveys to viewers the challenges he faced as a result of his disability, as well as his aspirations and expectations. The artist was able to closely observe his spatial requirements and the challenges he faced in his living space thanks to the movie, which was primarily edited inside a house (Figure 3). In the cinematic fiction, it is clearly stated that the first thing the artist needs, especially in the house he lives in, is a living space of his own.



Figure 3. Interior scenes in intersections of my left foot

Students were asked to create a living area for the main actor in this scenario. Christy Brown uses this space for sleeping, getting dressed, eating, drinking, relaxing, and engaging in hobbies. Living areas are crucial for people with disabilities. Those created with disabled people in mind will improve their comfort and, consequently, their quality of life. Disabled people encounter many challenges when trying to socialize and integrate into society. Hospitalization rooms need to be carefully planned, especially for people with physical disabilities. Weariness from standing still all the time, requiring assistance to get around, and pain

from their orthopaedic condition can all have a detrimental impact on the user's life and health. Because of this, design concepts that may differ should be developed with the user's disability in mind. The relationship between the bed, window, and door should be properly constructed during planning. In terms of natural ventilation, lighting direction, and visual comfort, the bed's placement should all be considered in relation to the window. The shape of the bed, its orthopaedic comfort, and its accessibility based on the disability are the most crucial aspects to take into account; however, the design of the bed should also avoid isolating or stigmatizing the disabled person. The disabled person's use should guide the placement of all other furniture in the sleeping area. It is important to make sure that nothing prevents users from accessing the content. The dressing area is another thing to think about in sleeping units. Depending on the disabled person's level of disability, these areas' dimensions, locations, and functionalities should change. For example, a visually or hearing-impaired individual will not have any problems accessing wardrobes of standard size and appearance. A physically impaired person won't be able to access or use them comfortably, though. Wardrobe placement should therefore take the user's disability into consideration. Even though designs can be made in sizes and shapes that are unique to the user group, furniture that can be moved with digital screens to take advantage of new technological opportunities helps make spaces easier to use. Once more, the user's interests should be carefully considered when designing hobby areas within the living space. For example, Christy Brown's physical disability limits what he can do in the hobby area that is specifically designed for him. The user's needs should be able to be met by the hobby areas that are to be created appropriately.

Specific to all these parameters; students were instructed to empathize with the artist in the first phase of the study to comprehend the journey Christy Brown went through. They were asked to jot down some ideas regarding the issues that were not verbally expressed but were seen from the viewpoint of a designer to comprehend the artist. These concepts constitute the essence of the message to be given. Concepts are representation and presentation methods designed to ensure that the idea to be put forward is understood. According to (Dodsworth & Anderson, 2019), the concept is "a reference for the designer and a basis for the development of the design process, which can control all the decisions made during the design process, such as the appearance of the space, the atmosphere and the elements." These concepts serve as the foundation for the design and the conceptual framework. In order to accomplish this, the participants employed a method of transfer to visualize and articulate the concept they had established. The originality of the design, along with the quality it achieves, is realized through the process of concretizing the concept and effectively translating it into the design.

In the third phase of the workshop, team members were asked to design a living space without any limitations in space and area in order to

produce solutions that would meet the needs of the artist who is known to have lived in the 1930s, if he had lived in today's conditions, within the framework of today's technological opportunities. The problems and abstract concepts that have been identified are closely related to the type of product that needs to be produced. Every product designed in the workshop was assumed to address the issues identified by the Scamper method. By asking each other questions, the team members revised the ideas they presented during the collaborative design process. Six distinct scenarios and result products were produced during the workshop; four of these could be used with the steps of the scamper method, while the other two could not be used with it. The workshop, which took an entire day and was conducted in group settings, yielded a comprehensive array of final products and content, which are presented in detail below.

FINDING AND DISCUSSION

Freedom Team: "I felt isolated, confined to my own world, unable to interact with people, and kept out of their lives and activities as if there were a glass wall dividing my existence from theirs..." The work's concept scenario—epiphany, which refers to an unexpected awakening and awareness—is assessed in light of Christy Brown's admission in the film about his loneliness. Christy Brown's journey back to his true self, his realization of who he is via understanding his thoughts and creations, and his liberation from an oppressive life form the central arc of the work. The foundation of Solution 2 is a glass-covered living area. The space's module is made to respond to activities such as eating, drinking, sleeping, resting, and performing arts. The module was created in a way that would not marginalize a normal person by following inclusive design guidelines, rather than for someone with an external disability. Christy Brown's bed unit will be accessible because of the elevator platform that is directly in front of it. The wardrobe next to the bed features a digital sliding mechanism. The user will only need to press one button to access it thanks to this mechanism. The workspace, which accommodates readings and artistic endeavours, is likewise equipped with an elevator and a digital system. The artist will be able to freely create his art and establish a connection with nature in this way. The Freedom team's concept, scenario, sketch, 3D models, and concept sheet are all shown in great detail in (Figure 4.).



Figure 4. Freedom team's working diagram

Compassion Team: The artist's mother was his greatest benefactor throughout his life, demonstrating the impossibility of obstacles in the face of compassion and faith. This was seen as establishing the definition of "compassion" and demonstrating that in Christy Brown's case, the seemingly impossible was, in fact, impossible. Under the heading of "design for everyone," practical designs and comfortable spaces that allow the artist to carry out numerous daily tasks in one location were introduced during the design phase. The use of soft tissues and their reflection in the environment concretize the softness perception that compassion, an abstract concept, evokes in the individual. For Christy Brown's daily activities and hobbies, an organic-shaped sleeping unit integrated with the floor was designed, and the soft-textured materials used on the surface complemented the concept. The patient must always lie in a supine position, a sky window was built directly above the sleeping area. He has a place to work on his daily artistic projects because of the seating unit and the angled work surface made of amorphous forms. The living space's aesthetic elements have been completed with the use of the artist's own works, and if he regularly views his creations, he will continue to be convinced that he has accomplished the seemingly impossible. (Figure 5.) presents the compassion team's concept, scenario, sketch, 3D models, and concept sheet in detail.



Figure 5. Compassion team's working diagram

Entity Team: The concept of "entity" was established in the story's concept scenario, which showed how Christy Brown—who was believed to be mentally disabled at birth—was able to come back to life with the help and belief of his mother and other family members, and how an invisible character became visible through extraordinary efforts and accomplishments. Existence in the universe or thought has been assessed as the definition of entity. The space setup's use of the dominant dark blue colour aligns with the artist's goal of making his presence in society known. The amount of colour that dominates the room is directly correlated with how visible and present Christy Brown is in daily life. The artist's living conditions have been attempted to be enhanced through the use of modular and functional furniture that is designed based on the user's disability. A functional computer complete with a hanging bracket was positioned in the working unit of the living area, which was designed

with technological approach elements in mind. In this manner, voice control and button-based movement of the module are possible. A large window surface in an organic form was created at the intersection of the ceiling and the headboard, by the design approach that integrated daylight and nature. The user can easily access the area because the lying unit is positioned on the floor at an angled and softly shaped elevation. Touch panels will be used to access storage and HVAC systems. (Figure 6.) presents the entity team's concept, scenario, sketch, 3D models, and concept sheet in detail.



Figure 6. Entity team's working diagram

Sky Team: Christy Brown's film editing highlights the artist's constant window-sitting as a way to reveal his connection to life. This is attributed to the artist's desire to be involved in life, through a transparent surface, and his observational spirit. The notion that Christy Brow took in his surroundings and adapted them into sketches and writings led to the conclusion that opening up the living area to the outside world was more of an obligation than a necessity. The living area is designed as a circular space with windows on all appropriate surfaces, including the walls and ceilings, which can open to the outside. Sun control was implemented on window surfaces through the use of a remote-controlled curtain system. The sleeping unit's circular appearance and curvilinear elevation on the floor contribute to the balance of the form-space relationship. A digital mechanism has been utilized to create a movable channel on the living area's floor. The artist will have easy access to the desired area of the venue because of the seating unit that is positioned on the channel. Space is saved and storage areas that are appropriate for the artist's use are created because of the work surface's ability to open and close. (Figure 7.) presents the Sky team's concept, scenario, sketch, 3D models, and concept sheet in detail.

Figure 7. Sky Team's Working Diagram



CONCLUSION AND RECOMMENDATION

The research was created during a workshop on applying the Scamper method, which is widely applied in many modern educational initiatives, to the study of interior architecture. Asking a series of questions to solve a problem or taking into consideration other aspects of an opportunity is known as the Scamper method. The final products, encompassing the spaces and modules developed for Christy Brown, were presented for evaluation to a jury comprising four members. This jury included workshop managers who possess expertise in the field of accessible design, as well as faculty members from the Interior Architecture Department at Selçuk University. The assessment focused on the quality of responses regarding the functionality of the final products within the context of the SCAMPER method, with each aspect being evaluated separately. Consequently, it was determined that every final product addressed the questions and was appropriate for the steps of the scammer method. The study's evaluation table is shown below (Table 1.).

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Table 1. End Products Evaluation Chart

| QUESTIONS ABOUT THE SCAMPER METHOD | | | ÖZGÜRLÜK EKİBİ | ŞEFKAT EKİBİ | VARLIK EKİBİ | GÖKYÜZÜ EKİBİ |
|------------------------------------|--|--|-------------------|-----------------|-----------------|------------------|
| | <u>Substitute</u> | What other products can be substituted for standard ones? What else, for instance, could be utilized in place of a work area and a typical bed unit? | ✓ | ✓ | ✓ | ✓ |
| | <u>Combine</u> | Does the product have the ability to combine? Can various functions be used together, for instance? | ✓ | ✓ | ✓ | ✓ |
| | <u>Adapt</u> | Can the combined functions accomplish the intended goals? | ✓ | ✓ | ✓ | ✓ |
| | <u>Modify</u> <u>Minify</u> <u>Magnify</u> | Minify, Magnify: Is it possible to alter the product's shape and dimensions? | ✓ | ✓ | ✓ | ✓ |
| | <u>Put to Other Uses</u> | Does it adhere to inclusive and universal design principles? | ✓ | ✓ | ✓ | ✓ |
| | <u>Eliminate</u> | Will the product's functionality be compromised if certain components are removed? | ✓ | ✓ | ✓ | ✓ |
| | <u>Reverse</u> <u>Rearrange</u> | Can the resulting product be converted to another function? | ✓ | ✓ | ✓ | ✓ |

The goal of design education is to create a framework that, in addition to the knowledge acquired from previous instruction, will generate novel and creative works based on recent fiction. This can be achieved by teaching designers to question, criticize, observe, sympathize, and

generate new ideas from a wide range of viewpoints. The limited design education found in conventional teaching approaches limits students' capacity for original thought and may be detrimental to their ability to think creatively. Maintaining a balance in the teacher-student relationship is essential to libertarian design education. Within this framework, the workshop—which is conducted voluntarily and without regard to grades—are illustration of instructional models appropriate for the liberal learning approach. Workshop uses a method that fosters collaboration between the teacher and the student and advances learning through idea sharing. Specifically, because of its flexibility and collaborative environment, the inclusive design and empathy-based "From Scenario to Space" workshop helped students develop their liberal thoughts and stimulated their creative thinking.

In this sense, the research involves assessing through a workshop, study the potentials and learning outcomes that can arise from approaching the fields of interior architecture and cinema with an empathy-based approach. Below is a list of the learning objectives that the "From Scenario to Space" workshop offered. This particular method is centred on inclusive design and empathy.

- Collaborative learning has been enhanced by applying the Scamper method to the discipline of interior architecture, resulting in an activity-based thought process.
- Thanks to its flexibility, it has helped students develop their liberal ideas, which has broadened their creative thinking process.
- Students gained the ability to design specifically for the user group identified for the shift from abstract to concrete concepts.
- They acquired the proficiency to devise a new approach utilizing abstract concepts.
- They also developed the capacity to generate solutions using the problem-oriented design development model.
- Disability status and variations in disability status have contributed to producing solutions suitable for user needs and expectations according to these differences.
- The method conveyed the ability to develop a design approach for disabled people through the perspective of empathy, enabling the students to understand the lives of different types of users according to their disability.

The study's focus, inclusive design, brings attention to the idea of egalitarian design, which will enable people with disabilities to exercise their cultural and social rights without facing discrimination and will result in solutions for environmental and everyday challenges. The study has indicated that interior architecture design students derive substantial benefits in terms of learning and experiential knowledge when they engage in the evaluation of spaces and products designed for ease of use by individuals with physical disabilities, in accordance with established inclusive design standards. The Scamper method helped students learn how to evaluate information, identify its flaws, gather the

data needed for development, come up with original solutions, and develop ideas, products, and problems that already exist. As a result, by integrating inclusive design principles into the curriculum of interior architecture, this initiative aims to improve the quality of life for individuals with disabilities through innovative practices. Within the framework of the SCAMPER method, aspects such as inclusive design, education, research, technology, and empathy will be assessed in conjunction. This holistic approach will facilitate the development of interactive design tools and maximize the utilization of technological advancements. Furthermore, the frequent application of environmentally sustainable and accessible furniture will be prioritized, along with a preference for dynamic and flexible furnishings. Ultimately, these efforts will yield designs that are more accessible, adaptable, and user-centric.

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Resume

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