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Revitalizing Ruins: Adaptive Reuse of Yamanlar Sanatorium as a Contemporary Summer Camp by Experiential Education in Interior Architecture

Deniz AVCI [1]*, Gözde ÖZDER ÇAKIR [2]

ORCID 1: 0000-0003-1157-5654
ORCID 2: 0000-0002-6785-1788

[1] *Izmir University of Economics, Faculty of Fine Arts and Design, Interior Architecture and Environmental Design, 35330, Izmir, Türkiye.*

[2] *Izmir Institute of Technology, The Graduate School, PhD Program in Architecture, 35430, Izmir,Türkiye.*

**** e-mail**: denizavci.hist.arch@gmail.com*

Abstract

This article evaluates module-based experiential education through the case of a junior-year interior architecture studio project for the adaptive reuse of the historical Yamanlar Sanatorium Complex in Izmir, Turkey. The project aimed to transform this example of Turkey's 20th century Modern Movement healthcare heritage into a summer camp for university students who were affected by the 2023 earthquake. The project drew attention to social problems like the increase in contagious diseases due to uncontrolled migration during the Syria's civil war and the housing crisis following the earthquake. The project's holistic design approach was examined through four connected modules: (1) context to concept, (2) concept to form, (3) form to detail, and (4) architectural model production (implementation). Design students as selected clients also encouraged participatory design. The project outputs fell into three categories: modular, rectangular forms influenced by the sanatorium building; forms inspired by nature; and sculptural forms with period influences.

Keywords: *Interior architecture, experiential education, adaptive reuse, modern movement sanatoria, Türkiye.*

Harabeleri Canlandırmak: İç Mimarlıkta Deneyimsel Eğitimle Yamanlar Sanatoryumu'nun Çağdaş Bir Yaz Kampı Olarak Yeniden İşlevlendirilmesi

Öz

Bu makalede, üçüncü sınıf iç mimarlık stüdyosunda gerçekleştirilen İzmir'deki tarihi Yamanlar sanatoryum kompleksinin yeniden kullanım projesi, modül tabanlı deneyimsel eğitimi değerlendirmek için incelenmiştir. Proje, Türkiye'nin 20. yüzyıl Modern Hareket sağlık mirasının, 2023'te meydana gelen depremden etkilenen tasarım alanlarında eğitim gören üniversite öğrencileri için bir yaz kampı olarak dönüştürülmesini hedefleyerek, Suriye savaşından sonra kontrolsüz göç nedeniyle Türkiye'de tüberküloz gibi hastalıkların artmasına ve barınamama gibi sosyal sorunlara dikkat çekmiştir. Dört bağlantılı modülle bütüncül bir tasarım yaklaşımı incelenmiştir: (1) bağlamdan konsepte, (2) konseptten forma, (3) formdan detaya ve (4) mimari maket üretimi (uygulama). Tasarım öğrencilerine yönelik tasarım, katılımcı işbirliklerini de teşvik etmiştir. Projeleri çıktıları, sanatoryum binasından etkilenen modüler, dikdörtgen formlar; doğadan ilham alan, çevreye uyumlu ancak yapıyla çatışan formlar; dönemsel etkilerine sahip heykelsi formlar olarak kategorize edilmiştir.

Anahtar kelimeler: *İç mimarlık, deneyimsel eğitim, yeniden işlevlendirme, Modern Hareket sanatoryumları, Türkiye.*

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1. Introduction

Within the objectives of a third-year studio in interior architecture and environmental design education at Izmir University of Economics (IUE), the semester project for Fall 2023-24 was determined as the historic Yamanlar camp and sanatorium complex in the *Karşıyaka* district of Turkey's third largest city, Izmir, located on the Aegean coast of Anatolia. As an example of republican 20th century modern heritage, the complex was to be converted into a summer camp for university students affected by the disastrous earthquake in southeastern Turkey on February 6, 2023. This earthquake devastated the nation, with thousands deceased and thousands unemployed and left homeless. To address the issue of the post-earthquake housing crisis, the studio aimed to convert an abandoned historic building that incorporated a similar contextual use in the past as a camping or accommodation site for tuberculosis patients.

The project aimed to increase social awareness regarding three main points: (1) the housing crisis facing the masses after the earthquake; (2) the housing crisis facing students, especially in major cities, due to high rents for dormitories or rented accommodation (a social issue even before the earthquake) (Anonymous, 2023; Cengiz, 2024); (3) the risk of demolishing a neglected historic building and exemplar of cultural heritage without regard for its history and importance. The project drew attention to the fact that the students' accommodation crisis is a social problem that requires the provision of free housing while a historic building could be reused rather than face neglect, decay and eventual demolition. Another social layer was the recent rise in contagious diseases in Turkey, including tuberculosis, due to the increasing number of immigrants entering Turkey since the civil war erupted in Syria. Given these issues, the project aimed to respond to the broader social, cultural, and political contexts of contemporary Turkey and create awareness that design is concerned with cultural, sociological, psychological, and political issues as well as medical, physical, and environmental ones (Bremner & Rodgers, 2013, p.4).

Interior design can often have negative connotations, such as being concerned with mere decoration. Especially when compared to architecture, it is often considered that the field lacks a social dimension. Due to these misconceptions, it could remain a self-contained practice (Chu, 2003, p.38). Hence, the studio course examined in the present study engages with a larger social dimension. As Salmon & Gritzer (1992, p.79–80) emphasize, "the physical environment can have a significant impact on social life, whether such an impact is intended or not. It is thus incumbent upon designers to realize that the space they design will have human consequences, and that professional responsibility includes anticipating these consequences." Design reflects the attitudes, customs, beliefs of its users; thus, "physical, social, and cultural contexts" are inherent in its emergence (Lawson, 2014; Zande, 2010, p.249). The technical skills of an interior architect remain insufficient if they ignore their obligations to the broader social context. Hence, design education should prioritize the integration of methodologies dealing with the relationship "between culture and social organization," "the processes of social conflict and social change" (Salmon & Gritzer, 1992, p.79–80), and consider specific populations, such as economically disadvantaged youth, disaster victims, hospital patients, prisoners, or the elderly.

The contemporary design approach should involve sharing knowledge between users and designers (Chu, 2003, p.46) while another important pedagogical component is understanding the nature of multidisciplinary and interdisciplinary nature of design. Design is fluid with evolving patterns. These "traverse, transcend and transfigure disciplinary and conceptual boundaries" (Bremner & Rodgers, 2013, p.8). Interior design education has thus realized the importance of collaboration between related design professions (Nubani et. al., 2018, p.218). Consequently, for the project assessed in the present study, the design question defined the user profile as "university students who major in the design field." The students specified the design field for their projects (e.g., design students from the fields of industrial design, visual communications design, interior architecture, architecture, photography, or music). There is strong evidence that participatory design models in (interior) architecture studios can enhance students' project development via social connections and collaborations (Nubani et al., 2018, p.219; Tokman & Yamacli, 2007). Hence, the studio course required students to place themselves on both sides of the design negotiation as designer and user.

The students were encouraged to communicate with their friends from other design fields while developing their projects for their selected user profile.

1.1. Tuberculosis and Sanatorium Architecture in Early Republican Türkiye and the Yamanlar Sanatorium Complex

A sanatorium is a type of healthcare facility that offers strict hygienic-dietatic-therapeutic treatment to enable tuberculosis patients to convalesce. The expansion of these facilities from the late 19th to the early 20th century was known as the "sanatorium movement" while the hygienic design principles they incorporated triggered the Modern Movement in 20th-century architecture (Campbell, 2005; Colomina, 2019; Overy, 2007). Although Turkey lacks the canonical examples of European counterparts like the Paimio Sanatorium by Aino and Alvar Aalto or the Zonnestraal Sanatorium by Jan Duiker Bernard Bijvoet and Jan Gerko Wiebenga, there were many examples of "standard" sanatoriums, which were *state-of-the-art* if not "iconic" as defined by Del Curto (2013).

The young republican state invested in fighting tuberculosis as part of its modernization agenda, which saw the health of the nation as an important branch in its development (İlikan Rasimoğlu, 2018; Yıldırım & Gürgan, 2012). Accordingly, the Turkish Republic invested in constructing state-of-the-art facilities based on the universal examples of Modern Movement sanatoria, i.e. block-type rectangular prisms formed of a modular repetition of rooms and balconies while avoiding historicism (Avcı & Değirmencioğlu, 2024). Heybeliada Sanatorium, Turkey's first state sanatorium, which was inaugurated in 1924, and its block-type state-of-the-art Block B structure built in 1945 and designed by architect Rebii Gorbon, became a model for Turkish sanatoria (Avci-Hosanli & Degirmencioglu, 2024; Yüzer, 2020).

During the early republican period, Izmir became the first center in the struggle against tuberculosis, with Turkey's first tuberculosis association established there in 1923 (Avci-Hosanli, 2023, p.678; Ülgen, 1947). The Yamanlar sanatorium complex in Izmir is unique in Turkey's sanatorium typology (Avci-Hosanli, 2023). The camp area (Figure 1), designated and inaugurated at the request of Atatürk, the founder of the Turkish state (Yavuz, 2017), was later expanded into a sanatorium complex, with the block-type sanatorium structure, designed by architect Arif Kınay, being constructed in the 1950s (Karabağ Aydeniz & Erdoğmuş Manav, 2015).

The camp, which covered 42 hectares and was situated 732 meters above sea level on Yamanlar Mountain in Karşıyaka, was inaugurated on June 10, 1932, by the Ministry of Forestry (Karabağ Aydeniz & Erdoğmuş Manav, 2015): In 1944, the area was registered to Izmir Tuberculosis Association. During the 1950s, the complex included a sanatorium building, two aeriums, 13 single accommodation units, and an administrative building, dining hall, casino, swimming pool, volleyball and tennis courts, and a field for up to 80 tents (Figure 1). The sanatorium structure (hereinafter "accommodation building") is a rectangular prism of 40x14 meters (Figure 2). Southwest of this is the dining hall (hereinafter "multipurpose hall"), dated to 1945, while the casino building is to the south (Figure 3). The latter two are single-story reinforced concrete structures with stone cladding. The accommodation building is a block-type rectangular prism of three floors with a basement floor. It is longitudinally extended with the main and longer south- and north-facing facades formed of modular, repetitive spaces. This modularity is reflected on the façade in that the rooms face the balconies on the south side while the room doors open onto a corridor on the north side. The second structure is a one-story open-plan ancillary structure.

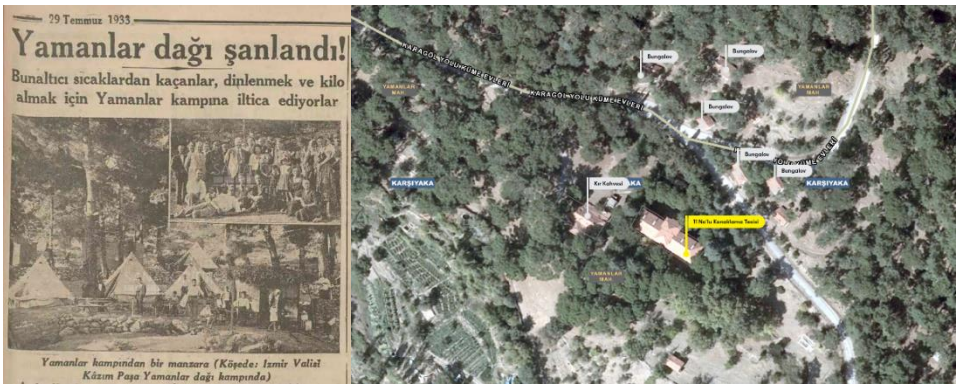

Figure 1. Left: Article reporting the annual inauguration of the Yamanlar camp (Doğanoğlu, 1933). Right: Aerial photo of Yamanlar sanatorium complex (Uslu, 2023a)

Figure 2. Accommodation building (Avci & Özder Çakır, 2023a)

Figure 3. Multipurpose hall (Avci & Özder Çakır, 2023a)

The complex was transferred to the Directorate of Provincial Regional Forestry in 2002 and then to Karşıyaka Municipality in 2011. Today, the complex is a heritage at risk. In 2017, the Yamanlar camp in ruins was noticed by the public (Yavuz, 2017). In 2021, Izmir City Council offered to renovate the complex, but this was rejected by the Ministry of Forestry (Anonymous, 2021a) due to insufficient technical specifications. The municipality pleaded for support (Anonymous, 2021b) before *Grand Plaza Hotel* proposed a project (Güçtekin, 2022) in collaboration with *Mert Uslu Mimarlık* [Architecture] (Uslu, 2023b) (Avci-Hosanli, 2023, p.684). According to Uslu (2023b), the project plans to demolish the complex's buildings because they are not earthquake proof and replace them with replicas. However, this approach is concerning regarding the conservation of Turkey's cultural heritage. Hence, given that Yamanlar sanatorium complex is an architectural, medico-social, and cultural heritage at risk, the interior architecture studio course aimed to focus on its adaptive reuse.

1.1. Using the Yamanlar Sanatorium Complex as a Case for Interior Architecture Education

During the Interior Architecture and Environmental Design's four-year undergraduate program at IUE, students take interior architecture studios in sophomore, junior, and senior years. Studio courses are

held twice a week for a total of eight hours for discussions, critiques, and presentations. These studios work on adaptive reuse, public interiors, residential interiors, and a senior-year thesis project focuses on AI and VR technologies.

Valuable research has been conducted on design education, mostly regarding educational methods, and focused on freshman, sophomore, and senior year interior architecture courses (Demirkan & Afacan, 2012; Erdman et al., 2002; Harwood, 2008; Hasirci et al., 2022). However, the junior year, though a very important step, has often been overlooked. Accordingly, the present study focused on IUE's junior-year interior architecture studio course, which contextualizes adaptive reuse in its design question with an understanding of a broader social context. By adaptive reuse, the course refers to a conservation proposal to update the use of, or find a new use for, an old site or historic building. In the studios, the students are expected to demonstrate their understanding of design elements like "space, line, mass, shape and texture" and design principles like "scale, proportion, balance, rhythm, emphasis, harmony and variety" (Hasio & Crane, 2014, p.38). The students are further expected to demonstrate critical thinking skills by establishing relationships between the built environment and human behaviors as well as by showing awareness of cultural and social issues, including the history of the site, building, or complex, and the social context that incorporates key social issues in contemporary Turkey, particularly earthquake risks, the spread of contagious diseases, and the housing crisis.

According to the project's scenario, the state owned the entire complex and converted this facility into a summer youth camp for university students specializing in design. The scenario imagined that the camp opens annually on June 1st and closes on September 1st, and is active throughout the summer months, as it was used from the early republican years until the 1970s (Anonymous, 1935, 1939; Doğanoğlu, 1933). The project's main goal was to design a camping resort for university students enabling specific activities to encourage the student users' participation and integration.

The design question asked for the adaptive reuse at the historical site of two structures and a central courtyard framed by them on its northern and western sides. The three key parts of the building program were (a) the block-type accommodation building; (b) the one-storey ancillary structure (multipurpose hall); and (c) transitionary structures in the courtyard between (a) and (b). The project required the incorporation of the buildings' immediate surroundings and the courtyard, the buildings' interior and exterior relations, circulation into and around the buildings, and a properly functioning layout inclusive of conceptual and functional decisions. The courtyard was included as an intermediary element that should expand the interior spaces through conceptual, functional, and aesthetic continuity with the design of the new transitionary structures to serve as places for public and semi-public gatherings, and private seclusion areas.

Because the accommodation building was considered as an example of cultural and architectural heritage, the students could not alter the facades, roof, or openings. The existing walls were approached with a similar sensitivity, though certain basement and ground floor walls were removed by the instructors to enable spatial experimentation. Optionally, the walls of the bathroom spaces could be removed. Other than these alterations, the students could not alter the accommodation building's walls or columns (Figure 2). However, the multipurpose hall could be approached simply as a shell or open space for free spatial play (Figure 3).

While a representative list of expected functions was specified, the students were also asked to elaborate on and modify this program according to their own concepts and scenarios. The project aimed to promote a variety of activities. Regarding the accommodation building, the half-basement floor and ground floor were to be used as the entrance and public venues, including reception and security, a lounge, small library and reading hall, a small café-bar and kitchenette with storage, administrative offices for four people (manager, accountant, public relations, and secretary), and public restrooms. For the accommodation building's upper floors, based on the modularity of the rooms and balconies, the design had to include two four-person rooms, two three-person rooms, and 12 two-person rooms, all with private bathrooms. Additionally, two one-person rooms were to be reserved for the workshop instructors.

Regarding the multipurpose hall, the students had to incorporate a dining hall, conference hall, and workshops with their own storage, a kitchen space with its own storage, and public restrooms. The students were free to experiment with this space without the partition walls through a multi-functional approach.

Finally, the students were asked to reimage the courtyard with structures of their own design. The goal here was to encourage them, as interior architecture students, to experiment with structural systems. The courtyard was defined as a "transitionary space" while the structures were "transitionary structures". The students were free to determine the exact nature of these structures: as mountable and demountable, using suspension or inflatable architecture, and/or any other structural systems of their own choice. The only requirement was that they should be spatially functional and create defined gathering areas, open-air workshop areas, and individual resting areas.

The design outcomes were expected to display universal design principles, accommodating the needs of all people (children, elderly, people with a cognitive impairment, etc.) (Levine, 2003; Zande, 2010, p.252). Additionally, there should be spatial efficiency that incorporated the integrity of the volumes and their functions with flowing interior and exterior circulation and flexibility for transformations, or upgrades. The design question drew on a holistic approach, starting from a larger scale of 1:200, including the landscape, before moving down to a smaller scale of 1:10. The aim was to create a conceptual idea first before maintaining this through the different scales.

The process of generating relevant design solutions includes specific steps. The constituent parts of this project were as follows: research; spatial, formal, geometric, and contextual analyses of the built environment; formation of the program with area requirements; generation of concept-level design ideas; translation and implementation of the concept into spatial planning and design solutions; overall materials selection; focus study on specific areas regarding materials, textures, textiles, lighting, etc.; detailing in 1:20 and 1:10 scales.

The students also had to consider the exterior-interior connections, landscaping, and expressions of the facades. After establishing proper circulation, spatial connections, public and private areas according to the needs, and the volumetric control of the space; the students had to consider lighting (both daylit and artificial), surface materials (including acoustics), furniture, textures, textiles, and colors. Finally, they had to consider infrastructural factors, such as HVAC and plumbing systems (Hasirci et al., 2022, p.659), although detailed productions were not required.

2. Materials and Method

The semester-long studio course was divided into four modules based on evidence that students tend to show greater clarity in their creative processes if specific tasks are limited to certain periods. Each module required successful completion of the previous module. The four modules are discussed in later sections as follows: Context to Concept (Section 3.1); Concept to Form (Section 3.2); Form to Furniture (Section 3.3); and From Ruins to Architectural Models (Section 3.4). The first three modules were all closely interlinked, thereby requiring a holistic approach from the students throughout, based on the concept they established in the first module. Though still linked to previous ones, the final module was more independent. In this module, the students prepared an architectural model based on their previous decisions. This model-making process often revealed potential problems regarding spatial, physical, and/or structural control of space. Solutions or adaptations could then be quickly incorporated before finalizing the model. In this final phase, the students had to provide a representative demonstration of materials and textures to enable assessment of their design's overall ambiance. Following an assessment of the students' projects in Section 3, the final section of the article (Section 4) discusses and evaluates the lessons learnt from this experimentation with modules/charrettes in an interior architecture studio course.

Two modules were conducted as charrettes, where the students experienced coming together with professionals. A *charrette* (Sanoff, 2005) is a workshop or a working session enabling an exchange of ideas between designer students and professionals (Nubani et al. 2018, p.220). As also pointed out by Nubani et al. (2018, p.227), design charrettes enhance students' understanding of buildings, social

issues, and, most importantly, clients' needs. Charrettes also enhance collaboration across design fields. Hence, incorporating a charrette component in the interior design studio aimed to gain the following benefits (Nubani et al., 2018, p.232–233): increasing collaboration with different designers and stakeholders, greater understanding of complex issues in real-life scenarios, and exposure to users' needs and problems. The IUE studio course incorporated two charrettes: a site visit with architect Mert Uslu during the first module and a model-making workshop with architect Ekin Güven during the final module.

The four modules covered the weekly based curriculum. For instance, the first module,"Context to Concept," focused on conceptual development, programming, research, and site analysis in weeks 1 and 2. The second module, "Concept to Form," covered spatial planning, functional layout, vertical connections/relations in weeks 3-6 before the first review in week 6. The third module, "Form to Furniture," focused on structural details, selection of materials and furniture, and the development of custom details during weeks 7-10 before the second review in week 10. The final module, "From Ruins to Architectural Models," focused on improving the designs by experimenting with the architectural models in weeks 11-13 before the final presentation/exhibition.

As part of their research, the students learned about student accommodation complexes from around the world, and studied designers' chairs, using their designated chair in their projects (see Section 3.3). The camp and dormitory examples included MIT Baker House Dormitory by Alvar Aalto; Camp Lakota, California, by Perkins & Will; Casa dell'Accademia, Mendrisio, by Könz-Molo; the Indian Institute of Management dormitories, Ahmedabad, by Louis Kahn; the Olympic Village Munich by Heinle, Wischer Und Partner; Peabody Terrace, Harvard, by Josep Luís Sert; and the Apartment Building Gasometer B by Coop Himmelb(l)au.

In the first charrette for site analysis, the students met the conservation architect Mert Uslu, and filmed a short documentary at the site after their discussions. Working in pairs, the students collected information by analyzing the landscape, structures, building interiors, spatial layout, use of materials, finishes, and observable infrastructure, such as lighting systems. The documentaries incorporated research on (1) the historical background; (2) architectural and spatial analysis (mass, shape, size, volume, and relationship to the surroundings); (3) a thorough analysis of an interior space of their own choice (including analysis of color, light and shadow, materials, and textures); and (4) an analysis of a detail from their own selection (e.g., tile, doorknob, joint) (Figures 4 and 5). For the following assignment (i.e., the development of concept), they had to select four keywords from the four parts of their documentary film. The aim was to improve their concepts based on these keywords and enable them to contextualize the characteristics of the historic buildings and site into their concepts.

The studio course was attended by 24 students. The course's outcomes are discussed below in terms of six successful projects that understood and met the course requirements by successfully converting a historic modern healthcare heritage into a contemporary camp for university design students affected by recent earthquakes.

This research article is thus based on the experiential education method that was adopted in the junior year interior design project/studio course. The article provides a critical analysis and evaluation of the students' projects, performance, work process, and progress by supporting the "charettes/modules" model with relevant literature. The process revealed that each module had to be adapted during the semester in accordance with the students' performance, necessitating considerable attention and adaptation to the students' requirements. The completed projects, as intended from the beginning of the semester and as a result of the experiential adaptation of the modules, demonstrated the holistic character of the interior architecture profession (to students), encompassing the contextual, conceptual, formal, and furniture-related aspects. The architectural models, as a concluding phase, enabled students to implement corrections to potential issues that might have been inadvertently overlooked during the design process. The projects thus demonstrated the efficacy and limitations of the experiential education approach, whereby tailored charrettes/modules were employed in the junior-year interior architecture project/studio course.

3. Findings and Discussion

This section presents and discusses the four course modules and two charrettes within these modules via the successful student projects: (1) *Tet+mation*, (2) *Pix-fash*, (3) *Layer+reflection*, (4) *Spirarchimedean*, (5) *Metamorphosis*, and (6) *Fashinnovation*.

The inspirations from concept development directly affected the outcomes (Table 1). Concepts inspired by the block-type sanatorium building resulted in modular, repetitive, rectangular forms, which harmonized with the building (Figure 4). Concepts inspired by nature resulted in forms in harmony with the landscape, though in opposition to the forms of the building. Hence, they were challenging for the students (Figure 5). Concepts inspired by the 1950s (when the accommodation building was constructed) resulted in designs that were more decorative than architectural. Among these one prevailed and resulted in forms that challenged the building and became more sculptural (and thus was included here). Several projects pushed the limits of this classification, with two achieving forms that could fall under two, even three categories (marked * and ** in Table 1). The following subsections elaborate these projects.

Figure 4. Details from the decaying block-type sanatorium structure that inspired students. Left: Period-style cement tiles in the circulation corridor on the northern side. Right: Brick masonry revealed by a decaying balcony wall on the southern façade (Avci & Özder Çakır, 2023a)

Figure 5. Inspirational details captured by the students during the site analysis. Left: Fireplace on the upper terrace floor of the sanatorium building. Middle: Yellow, teal, and white cement tile found detached from the structures. Right: Illustrating harmony between teal and red mosaic tile from the bathroom spaces of the rooms and leaves from nature (Avci & Özder Çakır, 2023a)

Table 1. Development of the projects: Concept inspiration to forms

Concept inspiration Forms	Inspired by the block-type sanatorium building	Inspired by nature	Inspired by the period of the sanatorium (the 1950s) and the new function
In harmony with the block-type sanatorium building	*Tet+mation* *Pix+fash* *Layer & reflection***	*Layer & reflection***	
In harmony with the landscape & in opposition to the forms of the building		*Spirarchimedean Metamorphosis*	*Fashinnovation**
Framed by the shell of the building (furnishing and fitting design)		*Layer & reflection***	*Fashinnovation**

3.1. Context to Concept

Regarding the development of the concept, students' approaches can be categorized into four main groups:

Concept inspired by the building

Designers have a responsibility to understand their creative contributions as part of a larger cultural context (Bremner & Rodgers, 2013, p.4; Friedman, 1994). The projects assessed in this subsection were able to adapt traditional and original elements and motifs and integrate them into the design. As Chu (2003, p.43) also explains, "by becoming familiar with the forms, styles, and techniques from the past, students could assimilate their essence and be able to transform it into something of their own." In the projects analyzed here, this inspiration of the building's characteristics evolved into something entirely new without breaking from originality and tradition.

Tet+mation was inspired by the modular and rectangular forms of the building, which provided a modular space for arcade game designers. Inspired by an arcade game from the 1980s, their concept developed from "dynamic" and "colorful" "frames". Combining the transformation of the building and the tetris game, they named their project by combining "tetris (form) + transformation (function)" (Figure 6). *Pix-Fash* presented a modular and dynamic fashion design concept using the geometric shapes and patterns of pixel art, which became popular in the early 20th century. Based on the keywords of "dynamic", "frame", "transition", and "tones of color", the project name combined "pix (form) + fashion (function)" (Figure 6). The aim was to create a functional, modular, and creative environment for fashion design students. Characterized by geometric shapes and patterns, the historic references were achieved with a level of sophistication as different furnishings and fittings were used together in subtle variations.

Figure 6. Concept boards of the Tet+mation (left) and Pix-fash (right) projects (IAED, 2023)

Layer+reflection revealed a combination of layers and reflections that created a complex and intriguing aesthetics (Figure 7). Inspired both by nature and the building's forms, the project's keywords were "transparency", "calmness", "layers of nature", "layers of building", "linearity", "mirror", and "shadow". The design proposal mostly focused on the term "layer" and aimed to empower interior

architecture students in the inspiring environment offered by the layers and contrasts between nature and the historical site/building, such as natural versus artificial and organic versus geometric.

Figure 7. Concept boards of the Layer+reflection (left) and Fashinnovation (right) projects (IAED, 2023)

Concept inspired from nature

Spirarchimedean was inspired by keywords "repetitive," "nature", and "organic", which resulted in the form of the Archimedes spiral (Figure 8). These words found a reflection in the spiral form of the ammonites and the balanced distribution of its nodes. The dark ambiance suited the needs of these graphic design and photography students. Notably, the project's circular form directly contrasted with the building's inherent linearity. Similarly, *Metamorphosis*, inspired by the process of a caterpillar turning into a butterfly, drew on the keywords "energetic", "colors of nature", "organic", and "natural light" (Figure 8), and was influenced by death-life-rebirth cycles in nature. This transformation proposal was also functional in enabling the landscape designers "to explore themselves, undergo transformations, and realize their potentials" and "to explore their creativity, learn new skills, and gain self-confidence." These definitions were appropriate for a camp.

Figure 8. Concept boards of the Spirachimedean (left) and Metamorphosis (right) projects (IAED, 2023)

Period inspiration: Concept from the 1950s

The third category included projects directly inspired both by the new function and the period of the accommodation building's construction. The students aspired to design their new interiors with a period-reference to the 1950s. *Fashinnovation* [fashion (function) + innovation (alteration+purpose)] was designed for a fashion studio (Figure 7). Hence, its forms imitated the main component of fashion design: textiles. However, to contextualize the building's history, the design also aimed at reviving 1950s' fashion, characterized by stripes and polka dots, with the innovation of the new contemporary technologies and amenities. The keywords were "fashion", "renovation", "light colors", "repetition", and "mosaic density". The building's original 1950s' features, i.e., the mosaics and cement tiles, were to be preserved. The spirit of the period was captured with light colors, repetitive motifs, and mosaic density in a combination of modern and nostalgic.

3.2. Concept to Form

In the process of turning concept into form, three main approaches with their branching strategies emerged. These can be categorized as (1) in harmony with the forms of the building (rectangularity, modularity, repetition); (2) in harmony with nature and in opposition to the forms of the building (undulating curves, spirals, shells); and (3) framed by the shell of the building (furnishings and fitting design). Each project is assessed under the same project names as before. The project definitions are described in the following order: the accommodation building, the multipurpose building, and the transitionary structures connecting the buildings. This is because the students considered the accommodation building as the core/root and their designs developed from there.

In harmony with the forms of the building

Tet+mation used tetris forms to shape the forms of the built-in furniture and as surface engravings that spread from the walls to the ceilings in the accommodation building's public spaces (Figures 9 & 10). The spatial adaptation of these forms could be achieved in "private" spaces, such as the bedrooms on the upper floors. Each room acted as a single tetris module in that each room was painted, furnished, and decorated in a single color. These colors also coded for the number of users per room. The project used lines as prevailing elements to define the connections between the *tetris* modules. These lines had the function of defining the circulation paths, especially in the accommodation building; i.e., paths directing users to their rooms. This linearity was also utilized to emphasize the structure's rectilinearity.

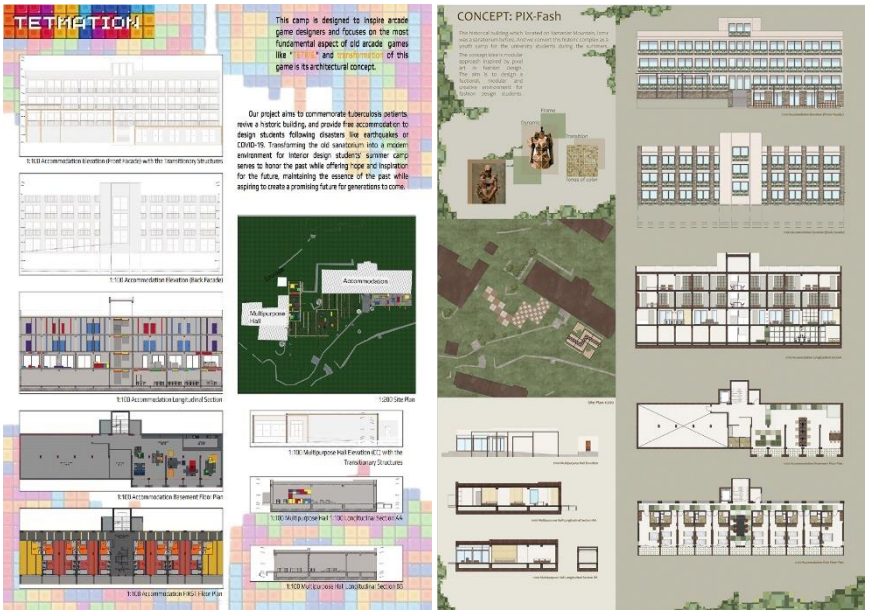

Figure 9. 1:200 site plan and 1:100 plans and facades of the Tet+mation (left) and Pix-fash (right) projects (IAED, 2023)

Figure 10. 1:50 Plans, materials board, and 3D visuals of the Tet+mation project (IAED, 2023)

While the project established a consistency with the *tetris* game and its modules, the students adopted a different approach for the multipurpose building and the transitionary structures. The accommodation building was more orderly, whereas the socialization centers of multipurpose hall and transitionary structures were left chaotic. The sanatorium structure's disciplinary nature referred to the sanatoria's disciplinary regimen in the history of tuberculosis treatment.

With multipurpose hall and transitionary structures, the *tetris* modules are dismantled and left free to hover in space (glimpses of De Stijl). In the transitionary structures, the lines of the disintegrated *tetris* modules become even more random: lines became timber struts to form the skeletal system of the structure and colorful planes (leftovers of the *tetris* colors) became the canopy. In the multipurpose hall, this approach changed once again. The struts gained color whereas the planes (the walls, the floor, the ceiling) were left in shades of white and gray. These transitions established a planned transition from order to chaos, from private to public, from calm to exciting. This approach was also in harmony with the forms of the buildings in terms of moving from the orderly rectilinear structure formed of modules to the disorderly multipurpose hall with its dynamic mass.

The *Pix-Fash* project aimed at continuing the repetitive, modular, and orderly forms of the accommodation building because these also coincided with the micro modules of the pixels (Figures 9 & 11). The color palette of teals, greens, and browns was inspired by the colors of the original cement flooring tiles in the patients' rooms and bathrooms as well as the paint colors for the window, door frames, and built-in cupboards (Figure 4). This was a well-received appreciation of the building's history referring to both the forms and the materials.

The merging of the pixel idea with the building's repetitive modularity was also implemented spatially because the spaces began to act as cubes of different sizes. Hence, the room as a cube became the spatial translation of the pixel. The sizes of the cubes were decided according to the function of the defined spaces. On the upper floors, each bedroom acted as a cube/pixel individually; in the transitionary structures, the cubes defined the passage and runway with its own seating as a structure of multiple cubes within a larger one (Figure 11).

Figure 11. 1:50 Plans, materials board, and 3D visuals of the Pix-fash project (IAED, 2023)

In harmony with nature and in opposition to the building's forms

The photography and film students in the *Spirarchimedean* project drew on the spiral form and dark ambiance of the ammonite fossil (Figures 12 & 13). Three fossils were placed in the three required sections: the accommodation building, multipurpose hall, and transitionary structure. The fossils were in three different phases: one was disintegrated to fit the rectilinearity of the building; one was merged with the multipurpose hall to act as a single piece; and one was decaying but still compact as the transitionary structure in a nod to the site and its "dilapidated" buildings (Jackson, 1980; Yablon, 2010).

Figure 12. 1:200 site plan and 1:100 plans and facades of the Spirarchimedean (left) and Metamorphosis (right) projects (IAED, 2023)

Figure 13. 1:50 Plans, materials board, and 3D visuals of the Spirarchimedean project (IAED, 2023)

For the public areas of the accommodation building, the fossil was disintegrated into sections, with each one adapted to the structure's rectilinearity. This disintegration naturally formed an inner and outer shell side. In the design of the public areas, these two sides defined the furnishing and flooring materials; the outer shell was represented by lighter timber parquet flooring, whereas the inner shell was represented by darker gray carpet/linoleum flooring. The inner shell areas designated the more introverted use of the public space, i.e., semi-private seclusion areas within the public spaces. This darkness in the basement floor supported the purpose of the cinema and photography ateliers. The shells became the focal elements in the bedrooms as study and gathering spaces for the occupants. Imagining the gathering as intimate, a similar inner shell/outer shell approach was applied using a black core (black carpeting) within a timber parquet flooring.

Another ammonite shell was integrated into the multipurpose building, or rather vice versa, the multipurpose building was integrated into the shell. Merged, the nature of the fossil was blurred between the new design and the old building. The timber parquet flooring (outer shell) signified the dining, entertainment, and socialization areas, while the black linoleum flooring (inner shell) signified the study, workshop, and conference areas. An open-air gathering area was defined beneath the massive ammonite's skeleton. Finally, the transitionary structure was also imagined as a single spiral fossil, slowly decaying though preserving its form (unlike the disintegrated one in the accommodation building).

The *Metamorphosis* project aligned the phases of the butterfly's life, from caterpillar to chrysalis (pod) to winged insect (butterfly), with specific functional requirements (Figures 12 & 14). For instance, the caterpillar phase was correlated with consumption; thus, caterpillar forms were utilized in gastronomic spaces. Similarly, in the accommodation building, the caterpillar defined the public areas, i.e., the gastronomic spaces, offices, workshops, library, study area, etc. The curvilinearity of the caterpillar was skillfully harmonized with the rectilinearity of the accommodation building. For the chrysalis (pod) phase, the selection of the bedrooms were evident as the pods answered to resting and seclusion within the rooms. Within the multipurpose building, as a place of consumption, the caterpillar forms, which created a path from the accommodation building, were used once again. For the winged insect phase, the socialization aspect of the transitionary structure was represented as an abstracted butterfly form, specifically a tensile fabric structure stretching over the caterpillar-shaped paths in the courtyard.

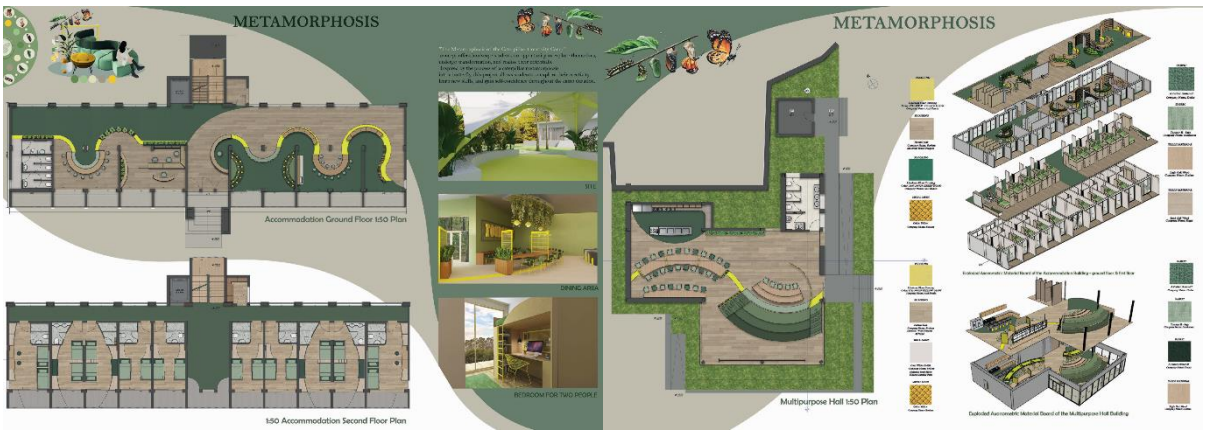

Figure 14. 1:50 Plans, materials board, and 3D visuals of the Metamorphosis project (IAED, 2023)

Framed by the shell of the building (furnishing and fitting design)

In line with its 1950s' period approach, *Fashinnovation* adopted the abstraction of textiles as a sculptural ceiling element in the accommodation building's circulation spaces and proposed a large canopy in the form of a cemented textile as the transitionary structure in the courtyard, recalling Sedat Hakkı Eldem's flying carpet in the Istanbul Hilton Hotel (Avcı Hosanlı, 2023). Although it might appear challenging to adapt these forms to the historic building, they were integrated into the interiors as sculptures while the transitionary structure remained independent (Figures 15 & 16). The project further used mid-20th-century polka dot and stripe fashion patterns, converted into the main forms of the project by transforming them into built-in furniture in addition to the flowing forms of fabric. Having been initially intended as a secondary approach after the polka dots and stripes, the petrified textiles ultimately became the primary element.

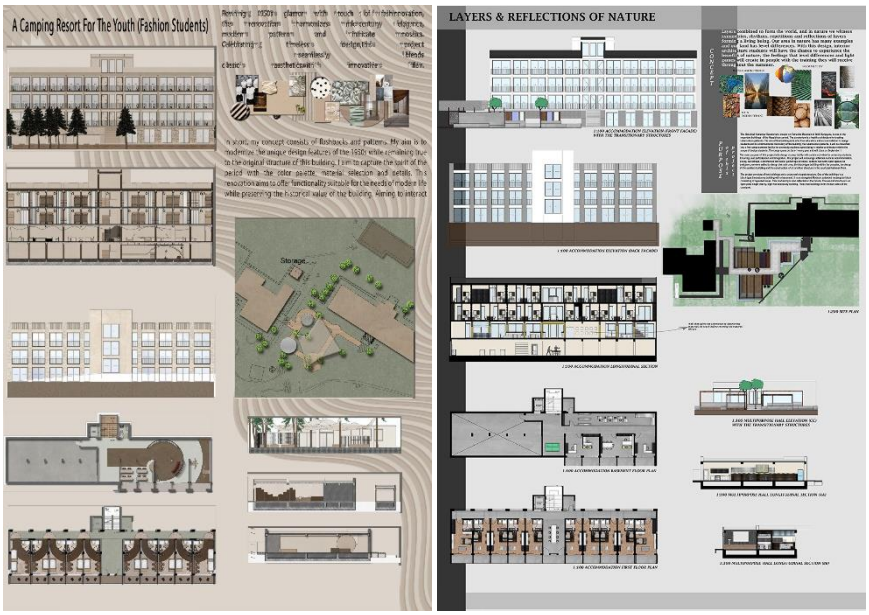

Figure 15. 1:200 site plan and 1:100 plans and facades of the Fashinnovation (left) and Layer+reflection (right) projects (IAED, 2023)

Figure 16. 1:50 Plans, materials board, and 3D visuals of the Fashinnovation project (IAED, 2023)

For instance, in the public areas of the accommodation building, the stripes were expected to provide an apparent linearity parallel to the building. However, these lines were intersected by massive polka dot shapes to indicate important spatial functions, such as the dining and workshop areas. The emphasis on linearity continued to the upper floors, especially in the corridors, with a dominant sculptural ribbon abstraction petrified in the cement that served as a ceiling structure with hidden lighting. In the multipurpose hall, this linearity was replaced by the polka dots to define different functions: the amphitheater, dining area, and the entrance hall. This approach was most successful in the courtyard, where the polka dots acted as openings in the textile-inspired canopy for the site's trees. In the transitionary area under the canopy, the stripes became paths while the polka dots became gathering and seclusion areas.

Although the *Layer+reflection* is categorized as being "in harmony with the forms of the building", its inspiration comes from reflections in nature, so the project falls into more than one category (Figures 15, 16 & 17). The repetitive reflections result in forms with in-depth effects, with transparent and reflective surfaces used to reflect nature into the interiors. Reflective surfaces formed in-depth frames and boundaries, which also referenced the building's modularity and repetitiveness.

Figure 17. 1:50 Plans, materials board, and 3D visuals of the Layer+reflection project (IAED, 2023)

The framed and boundaried structures extended to the courtyard and became modular transitionary structures, variously defining public gathering places, seclusion areas, and circulation paths between the accommodation and multipurpose buildings. Reflections were established between these frames via a Miesian shallow pool (referencing the Barcelona Pavilion). The transitionary structures lay perpendicular to the accommodation building, shadowing the layers of the modular balconies. The idea of reflection was dominant, especially in certain details. For instance, the bar area was designed with cubic glass bricks, while mirrors were used on the walls of the public areas with views of the forest. The framed tunnel on the ground floor, which was the main circulation route between the public spaces, was painted yellow to reference the sun's rays infiltrating the interiors through the repetitive slits of the buildings' original windows and openings as a nod to the Paimio Sanatorium's canary yellow corridors (Cartwright, 2023). The aim was to create "an environment of calmness" by "the sunrays infiltrating in". Nature was not only integrated through reflections; it was also achieved through the prevalent use of timber, especially in the bedrooms, with beds designed as cubic timber huts, referencing the idea of camping in nature, to form secondary layers within the room's frame.

3.3. Form to Furniture

To demonstrate how designing furniture is an essential part of the design process, the students were asked to implement designers' chairs in their projects. The instructors selected 22 famous architectural designers and their chairs, which were then randomly distributed among the students by drawing lots. At this point, the students had almost completed their designs, so they had to adapt the given chair for a space of their choice while the instructors anticipated and welcomed contrasting concepts, colors, and materials. The examples included chairs by Ludwig Mies Van Der Rohe, Gerrit Rietveld, Frank Gehry, Gaetano Pesce, Oscar Niemeyer, Daniel Libeskind, Waro Kishi, Julien De Smedt, Zaha Hadid, Piero Lissoni, Kazuyo Sejima, Frank Lloyd Wright, Eero Saarinen, Le Corbusier, Lina Bo Bardi, Marcel Breuer, Peter Zumthor, Mario Botta, Santiago Calatrava, Doriana and Massimiliano Fuksas, Mario Bellini, Alvar Aalto.

The students' responses to the assignment were evaluated in terms of three criteria: (1) getting to know the architect and their design approaches; (2) understanding the chair's design as an important component of a holistic design approach; (3) understanding the design connection/relationship between the chair and the building. The assignment thus demonstrated the influence of architectural design on smaller scale elements like furniture and objects in a *gesamkunstwerk*, a-total-work-of-art approach. This exploration continued with an in-depth analysis of the use of materials, textiles, textures, colors, and joints. Finally, the students integrated the chairs into the project by selecting a space for them and justifying their selection via sketches, 3D renders, or models. The inclusion of the designers' chairs enabled a greater comprehension of the connections between architectural design and its constituent elements. Furthermore, because of the random selection process, the students had to integrate a chair that could be either in harmony with or in contrast to their overall design concept, as discussed below.

Assigned designer's chair in harmony with the concept

Tet+mation presented an interesting case of balancing design synergy with functional relevance. Characterized by its modular nature and adherence to a strict grid system, the project seemed to find a perfect fit with the 184 Eve Chair, originally designed by Lissoni & Partners. Moreover, the chair's modular design fitted naturally with the project's overall grid-based structure. Having initially proposed using the chair for the project's office space, the students later realized the limitations of this in that the chair's design, intended for short-term use, would not provide the necessary ergonomic support for long office hours. Thus, they eventually placed the chairs in the multi-purpose hall's cafeteria and workshop area, which harmonized with the dynamic, multifunctional hall (Figure 18).

Figure 18. 184 Eve Chair by Lissoni & Partners in Tet+mation project (left) and Wiggle Chair by Frank Gehry in the Fashinnovation project (right) (IAED, 2023)

Fashinnovation was assigned Frank Gehry's iconic Wiggle Chair, which prioritizes ergonomics and aesthetics in the wavy form of its design. Regarding functionality, although visually stimulating in an office space, the students recognized that the chair would be uncomfortable as a desk chair (Figure 18), which required a re-evaluation of the chair's placement. The students determined that the balconies accessed from the rooms would provide a more suitable place for the Wiggle Chair (Figure 16). This new position preserved the chair's artistic value while removing it from an environment where its ergonomic deficiencies could hinder productivity.

Assigned designer's chair in contrast with the concept

The *Layer+reflection* project's students explored the relationship between dynamism and the rigidity of their strict line and grid system. This contrast required furniture that could complements both aspects. However, except for its reflective surface, Zaha Hadid's Z Chair, with its sharp angles, sculptural form, and bold curves, which convey a sense of movement and fluidity, contrasted with the project's approach. The students placed the chair in the lounge spaces, designed for informal meetings and conversations, which demonstrated an understanding of how furniture can bridge the gap between seemingly diametrically opposed design concepts. The Z Chair's unique form encouraged a dialogue between the structured grid system while harmonizing with the reflections (Figure 19).

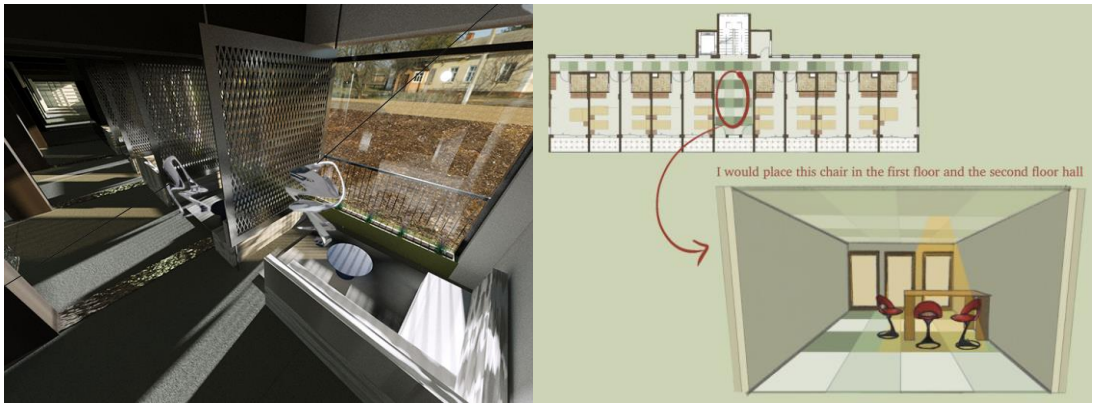

Figure 19. Z Chair by Zaha Hadid in the Layer+reflection project (left) and Tabourettli Theatre Chair by Santiago Calatrava in the PIX-Fash project (right) (IAED, 2023)

PIX-Fash was given the Tabourettli Theatre Chair, designed by Santiago Calatrava, known for his expertise in organic forms and use of biomimicry. Consequently, the chair was in complete opposition to the project's highly stringent grid system. The students placed the chair in the communal areas between the rooms, which meant that as the users ascended the staircase, the vibrant red color of the Tabourettli Theatre Chair stood out in a highly conspicuous location against the project's green backdrop, thereby creating a visually striking focal point (Figure 19).

Maria Botta's rectilinear Seconda Chair was matched with two projects, *Metamorphosis* and *Spirarchimedean*, which both adopted curvilinear approaches. In response to this challenge, the students placed the chairs within computer rooms and library spaces to hide this contrast (Figure 20).

Figure 20. Seconda Chair by Maria Botta in the Spirarchimedean (left) and Metamorphosis (right) projects (IAED, 2023)

The students' journeys highlighted the importance of considering both form and function when selecting design elements and furniture for environments. While experimenting with forms can spark creative inspiration, ensuring practical usability remains paramount in certain spaces. The students demonstrated a thorough consideration of user needs while recognizing that the intended purpose of the environment determines optimal functionality and user experience.

3.4. From Ruins to Architectural Models

Architectural model making is essential pedagogically. Furthermore, architectural models are an important part of architectural history in enabling communication by different stakeholders, such as professionals, the state, designers, and the public (Altan, 2020; Degirmencioglu & Avci-Hosanli, 2022; Derviş, 2020). For model making, technology can both be a blessing and a threat. In particular, various interior architects' responsibilities and skills, such as drawings, drafting, and architectural model making, are diminishing (Chu, 2003, p.43–44). Another problem is that copying a computer-generated design can threaten interior architects' creativity. Thus, another aim of this studio was for the students to experience crafting within their profession and experience the way that the design process continues and evolves while making architectural models.

Although the students were able to understand the selection of materials and construction detail-solving, they struggled to imagine these in real life scenarios (Hasirci et al., 2022). To help overcome this, they were asked to make two architectural models: one was at 1:50 scale for the accommodation building, the other was at 1:20 scale for the 3-person bedrooms. Both models had to demonstrate selection of materials, colors, and textures. This proved extremely beneficial for understanding how structure and materials interacted, and helped the students to more easily communicate their ideas and designs. The students were asked to conduct a thorough selection of materials for fitting, furnishing, and built-in furniture. Their approaches fell into two groups: (1) uniformity established by the use of few materials (e.g., *Spirarchimedean* and *Metamorphosis*); (2) selection of many materials for variety (e.g., *Layer+reflection*).

During the final weeks of the semester, a two-week workshop was conducted with architect Ekin Güven on making architectural models of the projects. The aim was to create a physical environment in which the students could grasp the challenges of implementing concept and design, and experience structures and forms beyond a virtual screen. Through their architectural models, the students had to demonstrate their use of materials, colors, fabrics and textures, and fittings and furnishings. The aim

was to guide students to see if their designs were actually significantly impactful, and determine if their alterations and additions would harm the historic buildings in any way. Making the models also helped the students to control the three-dimensional space and prevent their design from becoming merely two-dimensional through furniture and fitting selection. This aligned the projects with the essence of interior architecture education, namely developing sculptural, structural, and enveloping control of the space.

The students adoped two approaches to making their models: (1) constructing them layer by layer with each floor acting separately but forming the overall structure when joined together (Figure 21); (2) constructing the building's shell first, i.e., the exterior walls, before placing each floor within it, separately from the shell (Figure 23).

The process of building the architectural models revealed certain findings. For example, *Tet+mation* successfully impelemented the spatial application of the tetris modules in the rooms, although only by altering the surface due to the rooms' modularity (Figure 21). However, this approach needed a new perspective for the public areas of the ground and basement floors since the space had lost its modular nature. Here, the students added furniture scale modules. However, while constructing the model, the students realized that this remained a two-dimensional approach to design. They therefore altered the ground-floor ceiling by adding a suspended ceiling and lighting design, which complemented the furniture from above (Figure 21).

Figure 21. 1:50 architectural models of the accommodation building and transitionary structures of the Tet+mation project (Avci & Özder Çakır, 2023b; IAED, 2023).

The *Pix-fash* project students demonstrated two important approaches in constructing their model. First, the use of the original cement tiles in the balconies and the mosaic tiles in the balconies commemorated the building's history as a cultural heritage. However, working with the cubic models demonstrated challenges in that the floor-to-ceiling modularity risked becoming merely two-dimensional. The students therefore altered the transitionary structure to avoid this. Used as a runway for presenting the fashion student users' work, the seats were shaped by smaller cubes within larger ones at the corners of the structures in a three-dimensional approach (Figures 11 & 22). Through this alteration to the runway, the project became one of the few able to offer the transitionary structures as more than just a canopy.

Figure 22. 1:50 architectural model of the transitionary structure of the Pix-fash project (Avci & Özder Çakır, 2023b; IAED, 2023).

Layer+reflection's model-making phase was incredibly successful and led to a realization and thus a final alteration. More specifically, the students recognized that their use of nature-based colors and materials meant that their final design lacked dynamism and color (Figure 23). They therefore painted the large frames in the main circulation and lounge area of the accommodation floor yellow, which reflected the sun and the canary yellow of the corridors of the Paimio Sanatorium. This was a welcome reference to the architectural history of tuberculosis treatments while enlivening the overall design. The model was crafted skillfully down to the smallest detail: materials were shown in the model with the bar counter formed of luminescent glass-bricks and the timber amphitheater for various organizations (Figure 24).

Figure 23. 1:50 architectural model of the accommodation building (ground floor) of the Layer+reflection project (Avci & Özder Çakır, 2023b; IAED, 2023)

Figure 24. Detailed views (left and second left) from the 1:50 architectural model of the Layer+reflection project, showing public spaces of conference hall and gastronomic spaces. Detailed views (right and second right) from the 1:50 architectural model of the Spirarchimedean project, showing the ground floor public spaces (Avci & Özder Çakır, 2023b; IAED, 2023)

The architectural model of the *Spirarchimedean* project communicated the effective structural/sculptural control of space (Figure 25). While making their model, the students realized that the inner partition walls needed greater variety to prevent monotony. This variety would also reference the decomposition of the ammonite shell. The model-making process also helped the students to finalize three forms of partition walls (Figure 25): (1) colored vertical timber struts with visual permeability; (2) horizontal timber elements with visual permeability; and (3) solid, black-painted partition walls to separate and isolate. As expected, these color selections through the model created dense, dark spaces. However, the need for more color after the reveal led the students to add the burgundy color of the transitionary structure. In detailing the interiors, the students skillfully demonstrated the nature of the inner and outer shell references through the gathering areas, which were crafted with the smallest details of the fabrics, textures, cushions, and indoor plants. The finished model confirmed that the students' selection of a limited number of materials effectively created a holistic ambiance within the interiors (Figure 25).

Figure 25. 1:50 architectural model of the accommodation building and the transitionary structure of the Spirarchimedean project. Views of basement and ground floors with a focus on the public spaces (Avci & Özder Çakır, 2023b; IAED, 2023)

The *Metamorphosis* project's model-making process provided similar findings (Figure 26) in that the use of limited materials created a holistic consistency in the overall space. However, the completed model revealed that the partition walls of metallic wire mesh, which formed the curves of the caterpillar, needed more color. Thus, the students added yellow hues to the wire mesh (another reference to the Paimio sanatorium). The students' use of greens and yellows against white surfaces provided another reference to hygienic environments, and thus a nod to the nature of a healthcare building. Before the model-making workshop, the students had been struggling with the transitionary structure in that they had taken the butterfly concept too literally so that, in the 3D computer visualizations, the transitionary structure ended in forms similar to a butterfly. The students were then advised to play with a fabric, and experiment with tension and suspension structures during model making. Consequently, their final design choice evolved into the anticipated abstracted butterfly form.

Figure 26. 1:50 architectural model of the accommodation building and the transitionary structure of the Metamorphosis project. Views of basement and ground floors with a focus on the public spaces (Avci & Özder Çakır, 2023b; IAED, 2023)

The *Fashinnovation* project's students produced a model in which the flow of the fabric in the circulation areas, such as the decorative ceiling and its hidden lighting, had a prominent sculptural effect on the interiors (Figure 27). The students had previously imagined the fabrics purely as décor. However, the architectural model demonstrated the real effect of textile abstraction and revealed its dominant sculptural control of space, which made the stripes and polka dots ineffective as built-in furniture. The model also revealed a dominant control of the courtyard space with the transitionary structure: the cement abstraction of a flowing fabric amongst the existing trees became truly a unique element (Figure 27).

Figure 27. 1:50 architectural model of the accommodation building and the transitionary structure of Fashinnovation project. Detailed views of the transitionary structure with courtyard canopy (left) and ground-floor ceiling detail (right) (Avci & Özder Çakır, 2023b; IAED, 2023)

4. Conclusion and Suggestions

As the course instructors, this studio helped us assess the students' approaches to an architectural and medico-social heritage. The studio had three pedagogical aims: (1) establishing a concept that could reference both form and function; (2) implementation and maintenance of this concept in all interior layers and scales; and (3) designing at a variety of scales (from 1:200 to 1:10, 1:5, and 1:1) from the structural/sculptural aspects to fittings/furnishings to material selection, and involvement in furniture

design or selection. The students were guided to develop a holistic understanding of design by recognizing their responsibility for the design of details like handrails, doorknobs, and sinks. While most projects achieved the first two aims, there was still room for growth regarding the third.

The approaches categorized and discussed in Section 3 helped the students question whether the chosen historic building was suitable for designs that were in line with its forms or whether bolder, aesthetically challenging designs would attract more users and thereby be more effective in keeping the building in use and prolonging its life as cultural heritage.

Pedagogically, the students learned to understand the limitations of the historic building and site. They found that the existing walls and modular division of spaces were challenging, even though the instructors allowed the students to ignore the partition walls in the basement and ground floor, while the upper-floor bedrooms required modular division anyway. Furthermore, although the bathroom spaces and their walls were removed, the students did not challenge themselves by changing the existing bathrooms' locations.

The students also struggled continually with not being able to create gallery spaces or alter the sizes and shapes of the openings because they wanted to work with larger masses. On the other hand, they were given more freedom in designing the multipurpose hall and transitionary structures in the courtyard. One pedagogical limitation was that the task conserved the historic building's existing staircase. Consequently, the students were not challenged with designing a sculptural staircase, as would normally be required in an interior architecture studio course.

One of the most beneficial aspects of this project was the transitionary structures. The interior architecture students proved to be very talented in working with different structural systems and structural compositions, which answered the requirements of connections (between the two buildings), and offering private, semi-private and public areas within or beneath the canopy-like structures/designs.

Regarding spatial programming, there are several inferences to note. Although the project consisted of three main venues (accommodation building, multipurpose hall building, and courtyard with transitionary structures), the students considered the ground floor of the accommodation building as the most important space and gave most of their energy towards designing this floor. The repetitive modular nature of the rooms helped them. However, found the two- and three-person bedrooms challenging. In addition, despite being discouraged from doing so, they approached the four-person bedrooms as a symmetrical repetition of the two-person bedrooms.

Overall, this article analyzed the module-based approach in interior architecture education. The course's aim of encouraging the students to develop a holistic design approach was implemented through four interconnected experiential modules. These modules focused, respectively, on developing the concept, implementing it in form, solving detailing challenges, and making architectural models as a tool for communication and experimentation. Another beneficial aspect was the incorporation of two charrettes, one during site analysis and the other during the model-making process. These charrettes allowed the students to discuss their projects with professionals to understand the collaborative nature of the design field and establish relations for their future careers.

Moreover, the selection of the project's site and building was not random; rather, it aimed to address the broader social context of contemporary Turkey, addressing its accommodation crisis after the recent earthquake and the increase in contagious diseases in the country due to uncontrolled immigration during the Syria's civil war. Another layer of the design question was to understand the multidisciplinary nature of design; hence, various kinds of design students were selected as the projects' clients. This helped to convey the collaborative nature of the profession in that the students were brought together with other designers in the charrettes and encouraged to contact and discuss their projects with their designer friends as their selected clients.

As an overall evaluation, one of the challenges for the instructors was that the students did not voluntarily research the history of tuberculosis generally or in Turkey, or the history of Izmir's Yamanlar camp/sanatorium. Indeed, none of the projects offered healthcare services in their program.

Nevertheless, the results of design process demonstrated that the students were able to successfully and easily follow a module-based pedagogical structure and translated their concept inspirations into forms and details without disconnections.

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Author Contribution and Conflict of Interest Declaration Information

1st Author %60, 2nd Author %40 contributed to the article. There is no conflict of interest.

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