

Limited space and disaster awareness: a comparative analysis of curriculum transformation in interior architecture education

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Abstract:

The earthquakes of February 6, 2023, have demonstrated the need to revisit topics such as disaster awareness, limited-volume design, and spatial resilience in interior architecture education curricula. This study examines how post-disaster shelter and limited space-focused courses were integrated into the curricula of Interior Architecture and Interior Architecture–Environmental Design undergraduate programs at state and foundation universities following the earthquakes. The research covered the period between 2022 (pre-disaster) and 2025 (post-disaster); Higher Education Council (YÖK) data and universities' online curriculum documents were evaluated using content analysis within a phenomenological approach, in line with qualitative research methods. The findings show a marked increase in courses on limited space, modular systems, and temporary housing after the earthquake. However, it was determined that this increase mostly occurred at the elective course level, while compulsory courses on earthquake or disaster housing remain limited. The results show that, despite the growing importance of small-scale, modular, and flexible space design topics, this awareness has not yet been transformed into a holistic structure in interior architecture education. The development of compulsory courses based on disaster scenarios, focused on sustainability, and supported by interdisciplinary content, is considered critical for a more resilient interior architecture education in the future.

Keywords:

interior architecture; limited spaces; micro spaces; disaster education; curriculum

1. Introduction

Interior design education has expanded significantly, with the number of departments and graduates increasing; however, curricula have not evolved at the same pace as contemporary needs. Therefore, the current structure of interior architecture education requires reconsideration in line with emerging social and spatial challenges. This study examines the effects of recent events in our country that closely concern the construction sector on the educational aspect of the sector from an Interior Architecture perspective. Past studies examining the impact of limited spaces on the curriculum have identified areas where Interior Architecture curricula fall short. The earthquakes that struck on 6 February 2023 caused widespread destruction across 11 provinces; more than 518,000 buildings were destroyed or severely damaged, and thousands of people lost their lives and were left homeless [1]. Following the earthquake, major challenges emerged, particularly in housing and reconstruction. Undoubtedly, the most significant problem has been the housing issue for earthquake victims, and this has generally been addressed in the initial stages through tents and container structures. Although these units were rapidly installed, many lacked long-term spatial adaptability and professionally developed interior solutions. Post-disaster housing must therefore provide efficient, functional and psychologically supportive living environments. In this context, the study emphasises the role of spatial design and underscores the need for training for those responsible for designing these spaces.

Considering that Turkey is an earthquake-prone country, improving designers' competencies in post-disaster spatial solutions is essential. It is crucial to begin by providing students with the perception, awareness, and design knowledge necessary for disaster housing and similar structures, which are limited in volume. A study conducted in six secondary schools in Mexico City between 2015 and 2016 found that 83.5 per cent of students wanted to learn about earthquakes and acquire more information on the subject [2]. These findings highlight the importance of early disaster education. In other words, the basic education on earthquakes and natural disasters needs to be widespread and deepened. It should then be taught as a mandatory course, establishing professional relationships and linking it to the preferred discipline in higher education. Disaster resilience has become an increasingly widely accepted goal among design professionals, academics, and educators [3]. Regardless of the field of study, it is now imperative that disaster and post-disaster education be consistently kept on the agenda of citizens as a national reality.

The February 6, 2023, earthquakes highlighted the necessity of integrating disaster preparedness and resilience-oriented design approaches into interior architecture education. The disaster also emphasised the importance of educating future designers about resilient spatial planning and post-disaster living environments. While the focus of this study is on post-earthquake disaster housing and the limited-space structures used for this purpose, a significant shortcoming is the spatial organisation of the structure during a disaster. Interior

architecture, as a scientific discipline, should research and provide the appropriate spatial layout for all building projects, during disasters, and in the event of disaster-caused destruction and damage, to ensure the survival of users and their safe evacuation. Research and educational content on this subject are also lacking. Although the study was designed for the post-disaster period, it was deemed necessary to highlight this deficiency. In this context, studies have begun. However, studies focusing on post-disaster awareness and spatial preparedness tend to decline over time as public attention gradually decreases [4].

Following the earthquake, university education temporarily shifted to distance learning, significantly affecting practice-based disciplines. Although efforts are being made to continue education remotely, it should be noted that disciplines such as interior design, architecture, and similar practice-based disciplines have been significantly affected. Within the scope of the study, a literature review was conducted on a limited number of spaces.

2. Literature review

Earthquakes are among the most destructive natural disasters worldwide [5]. Strengthening structural resilience and disaster preparedness are key components of risk management. Studies emphasise that disaster awareness should be developed through lifelong education, with schools playing a central role in this process [6,7]. Educational institutions play a central role in disaster awareness and preparedness. The recent seismic event has increased the need to integrate disaster risk reduction and resilience-oriented approaches into architecture and interior design curricula. According to Charleson (2018), architecture students, especially those in earthquake-prone areas, need to receive adequate training in earthquake-resistant design [8]. The discipline of architecture occupies a central position in the formation of the built environment and must consider the reality of earthquakes as an integral part of the design process. In this context, the concept of ‘earthquake architecture,’ which is gaining importance in the literature, emphasises not only structural resilience but also user safety, spatial organisation, and post-disaster sustainability principles. Institutions providing architectural education have an increasing responsibility to foster this awareness. Indeed, equipping aspiring architects with earthquake awareness, a risk-based design approach, and relevant technical competencies is imperative from both a professional, ethical and social responsibility perspective [9]. The systematic inclusion of these topics in the curriculum prepares future professionals for the realities of natural disasters and promotes a culture of resilience within communities. Disaster-related education has expanded in architecture, interior architecture and design disciplines in recent years [10-12]. Similar curriculum transformations have also been observed internationally, particularly in countries frequently exposed to seismic and climate-related disasters such as Japan, New Zealand, and the United States. In these contexts, architecture and design education increasingly incorporate resilience-oriented studios, temporary shelter design, post-disaster recovery strategies, and community-based disaster preparedness approaches into educational frameworks. Ertaş et al. reported that earthquake-focused education significantly improved interior architecture students’ professional awareness after the 6 February earthquakes [13]. This clearly demonstrates that disasters strengthen the impact and value of educational processes. Therefore, at this time, when the social and

professional memory of earthquakes is still vivid, it is crucial to reassess the curriculum content of architecture programmes and update them with disaster awareness-based approaches [14]. In this regard, Krishnan and Liao (2019) also emphasise the need to integrate service-oriented learning and real-world experiences into the curriculum by including studios and seminars on disaster relief shelter design and education [7]. Recent studies also highlight the relationship between spatial design and psychological well-being in post-disaster environments [15,16].

In the event of a disaster, the Ministry of National Education ensures the establishment of temporary learning environments, and architectural design education must adapt quickly to these conditions. [17]. This situation is challenging to implement due to the structure of higher education institutions, which accommodate students from different provinces. Under the current circumstances, arrangements have been made to enable students to study at universities in their preferred provinces, where their departments are located, with the same status as exceptional students. However, in the context of National Education, it emphasises the need for information on the design of spaces that can be rapidly established to ensure the right to education in emergencies. Interior designers and architects again have a role to play in providing educational spaces that are comfortable, well-equipped, and allow students to be mentally and physically detached from environmental conditions. At the very least, universities must provide the infrastructure to familiarise students with this type of space and to offer design opportunities. The development of new teaching methods for earthquake education is also a frequently encountered topic. Teaching about earthquakes and encouraging students to research the subject is important [10,18-21]. In this context, curriculum additions that introduce new, advanced teaching methods will enrich the teaching process and encourage in-depth exploration of the subject matter. In the sources mentioned, attention is drawn to the development of courses with interactive technology infrastructure and simulation-themed games based on real-world data and the like. Participatory approaches involving communities and local authorities are increasingly emphasised [22]. By participating in community-focused projects, students can apply their theoretical knowledge to real-world situations, reinforce their learning, and enhance the practicality of their architectural designs. Digital simulations and gamified learning environments are also being used effectively to improve disaster preparedness training [23]. Simulation-based learning has been shown to improve disaster preparedness awareness [24,25].

Therefore, the 6 February earthquake serves as a catalyst for necessary educational reform in interior architecture. By integrating comprehensive disaster preparedness education into the curriculum, future interior designers will be better equipped to produce solutions that are resistant to seismic events while considering the safety and well-being of building occupants in their designs. Of course, this will not be limited to pre-earthquake safety but will also be effective in solutions that can save lives during earthquakes and in the design of mandatory restricted living units after earthquakes.

The earthquake of 6 February 2023 was a painful reminder of the necessity of disaster preparedness in the field of interior architecture. The responses of educational institutions and innovations in architectural design demonstrate a collective movement towards creating safer, more resilient structures that meet both the needs of occupants and the unpredictable nature of seismic activity. Looking at the literature and the results of the study, the effects of the 6 February earthquake appear to have triggered significant changes in interior architecture education

and acted as a driving force in the emergence of a curriculum that prepares students to understand the technical aspects of design while emphasising the psychological, cultural, and societal impacts of their work. By focusing education on resilience, adaptation and disaster preparedness, the study highlights the importance of ensuring that future interior design professionals are better equipped to create safe and supportive environments in the face of natural disasters. Earthquakes are a reality in our country, and it is vital to educate interior designers, architects, engineers, and citizens who are aware of this reality.

3. Method

This research examines limited-space course content in interior architecture programs at state and foundation universities in Turkey for 2022 and 2025. In the study, 2022 represents the pre-earthquake period, while 2025 reflects the period following the February 6, 2023, earthquake. In this direction, both years were considered separately, and the numerical change in courses for limited spaces in state and foundation universities was systematically examined. The analysis evaluates both the number and content of these courses. In the Turkish higher education system, state universities are publicly funded institutions supported by the government, whereas foundation universities are legally private, non-profit institutions operating under the supervision of the Council of Higher Education (YÖK). Both institution types provide undergraduate education in interior architecture and environmental design programmes. In this context, the compulsory or elective status of the courses, their theoretical or practical structuring, the differences in terms of

continuity and innovation, and the dynamics of curriculum transformation are revealed. In addition, the most frequently offered courses were identified. The analysis also examined course openings in earthquake-affected provinces. The research examines how the 2023 earthquake affected the content of limited-space courses in interior architecture curricula. Examining curricular changes after the 6 February earthquake provides insight into how limited-space design is reflected in education policies. In addition, data on the course content of the interior architecture department, for limited spaces, will contribute to more effective and comprehensive shaping of future education programs.

For a study to be considered scientific, it must follow a specific methodology, have a clear objective, and present its findings in a comprehensive manner [26]. In this context, the study examines a subject that has not been addressed in the field of interior architecture education. The data obtained from the Council of Higher Education were analysed using a qualitative research method. In this process, a phenomenological approach was adopted. A phenomenological qualitative research approach was adopted to interpret how curriculum transformations reflected emerging perceptions of disaster awareness and limited-space design in interior architecture education. [27,28]. Data were analysed descriptively and interpreted to generate future recommendations. This research, which examined the position of limited-space courses in the curricula of interior architecture departments in Turkey before and after the February 6, 2023, earthquake, was designed using a four-stage approach (Fig. 1).

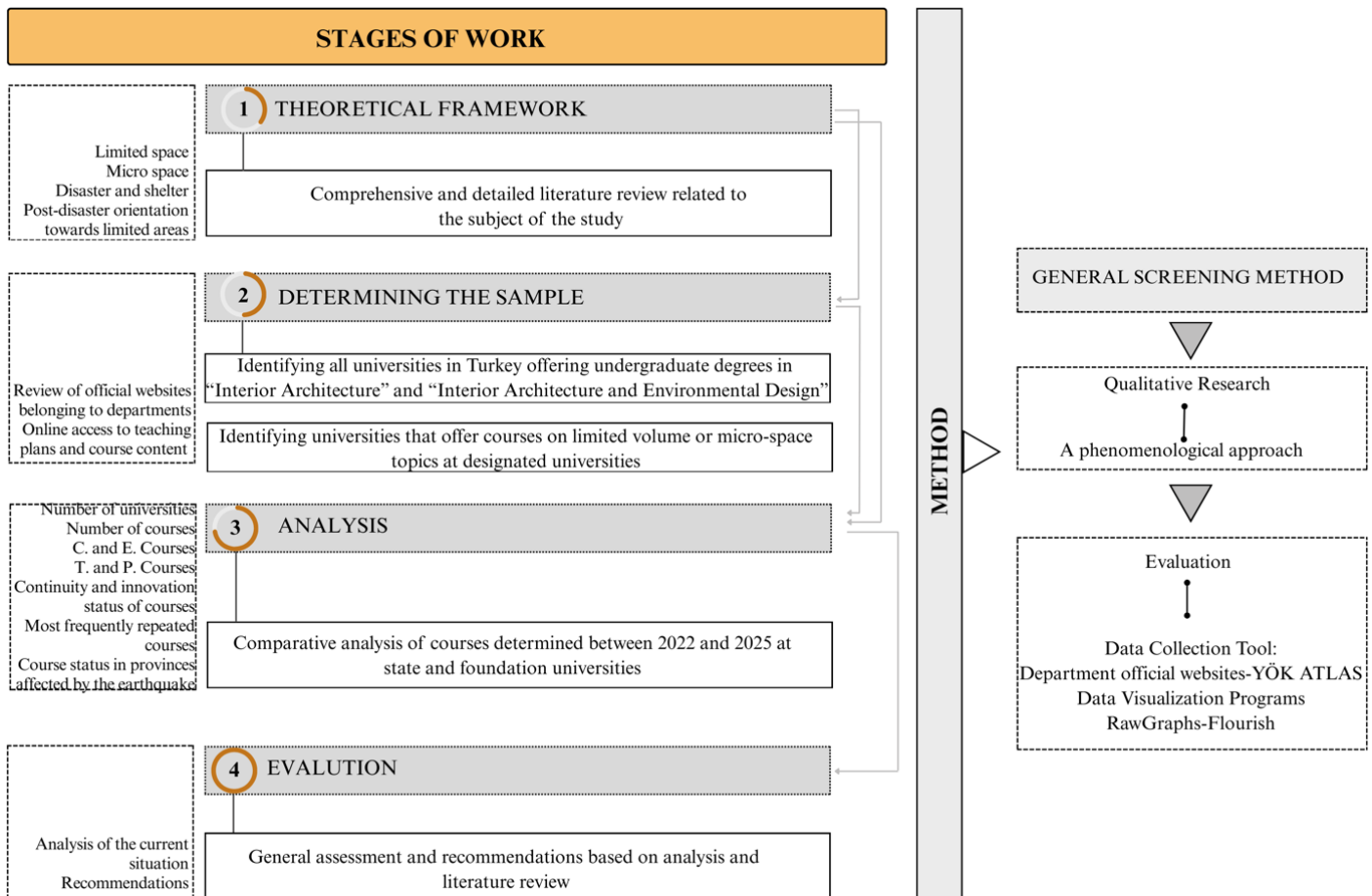


Fig. 1. The stages of the study

The study was designed in four stages. In the first stage, a literature review of both domestic and international sources was conducted, focusing on limited spaces relevant to the research objective. The second stage focused on the sample selection process, which was carried out in two steps. In the first step, all universities in Turkey offering undergraduate programmes in 'Interior Architecture' and 'Interior Architecture and Environmental Design' were listed in the YÖK Atlas to obtain data for 2025. After the universities were identified, the official websites of the Interior Architecture (IA) and Interior Architecture–Environmental Design (IAED) departments of state and foundation universities in Turkey were examined, and data were collected on 06.09.2025 and 12.09.2025. In this context, the study's sample comprised universities that provided online access to their teaching plans and course content and offered courses covering limited-space or microspace topics. The study's limitation is that it is based solely on information available on the universities' official websites. Universities were excluded from the sample if their course content was outdated or not accessible online. Therefore, the findings obtained are limited to the data that could be examined and accessed. Furthermore, programmes offered within the same university with different

scholarship rates or similar content were evaluated under a single university heading, and only undergraduate programmes at state and foundation universities were included in the study. During the sample selection process, the departmental web pages of the universities were systematically scanned, and undergraduate-level courses and their content were documented. The second step utilised data from 2022. At this point, Kurnalı's study, entitled 'A Study on the Educational Content for Limited spaces in Interior Architecture Undergraduate Departments in Turkey', served as the basis, and the researcher's 2022 survey results were utilised [29]. This study revealed the status of design education for limited spaces in İCM and İCMCT departments in Turkey in 2022. Therefore, the main sample for this research was formed by comparing Kurnalı's 2022 findings with the current 2025 survey data. Based on these data, the courses offered in limited spaces in the IA/IAED departments at state universities are presented in Table 1. University names, course names, and course statuses are indicated as compulsory (C) and elective (E), while course types are indicated as theoretical (T) or practical (P).

Table 2 presents data on courses related to limited spaces in the departments of Interior Architecture and Environmental Design at foundation universities.

Table 1. Courses for limited spaces in the Departments of Interior Architecture and Environmental Design: State Universities (2022 and 2025)

University	2022 Courses			2025 Courses		
	Course Name	C/E	T/P	Course Name	C/E	T/P
Afyon Kocatepe University	Fair Stand Design	E	2T-1P	Fair Stand Design	E	2T-1P
				Wet Space Design	E	2T-1P
				Stage Design	E	2T-1P
				Exhibition Showcase Design	E	2T-1P
				Kitchen Design	E	2T-1P
Akdeniz University	Boat Interior Design	E	2T-2P	Boat Interior Design	E	2T-1P
				Sales and Exhibition Units	E	2T-1P
Atatürk University	Stand Design	E	P	Stand Design	E	T
				Wet Volume Design	E	T
Bilecik Şeyh Edebali U.	Fair and Stand Design	E		Fair and Stand Design	E	2T-2P
Çukurova University	There are no courses.			There are no courses.		
Eskişehir Technical U.	There are no courses.			Stage and Set Design	E	2T-1P
				Exhibition and Exhibition Space Design	E	T
Hacettepe U.	There are no courses.			Stage Design	E	T
İskenderun Technical U.	There are no courses.			Bathroom Design	E	T
				Kitchen Design	E	T
				Fair Stand Design	E	T
				Micro Housing Design	E	T
				Mobile Homes	E	T
İstanbul Technical U.	Yacht Interiors Design	E	P	Yacht Interiors Desing	E	1T-2P
	Basic Princip. of Yacht Design	E	P	Basic Princip. of Yacht Design	E	1T-2P
				Exhibition Design	E	T
İstanbul University	There are no courses.			Yacht interior design and design management	E	T
Karadeniz Technical U.	Stand Design	E	P	Stand Design	E	T
				Stage Design	E	T
				Showcase Design	E	T
Kırıkkale University	There are no courses.			There are no courses.		

University	2022 Courses			2025 Courses		
	Course Name	C/E	T/P	Course Name	C/E	T/P
Kocaeli University	Fair Stand Design	E	P	Fair Stand Design	E	T
	Boat Interior Design	E	P	Boat Interior Design	E	T
				Showcase Design	E	T
Konya Technical U.	Vehicle Interior Design	E	P	Interior Design in Vehicles	E	T
	Space Design in Limited Volumes	E	P	Space Design in Limited Spaces	E	T
				Stage Design	E	T
				Exhibition and Exhibition Space Design	E	T
Kütahya Dumlupınar U.	There are no courses.			There are no courses.		
Marmara University	Interior Design in Yachts	E	P	Space Design on Yachts	E	T
	Yacht Design	E	P	Yacht Design	E	T
Mimar Sinan Fine Arts University	Exhibition Design	E	P	Spatial Design in Exhibition and Showcase	E	T
				Fair and Promotion Stands	E	T
				Exhibition Spaces from the Beginning to the Present	E	T
				Stage Design	E	T
Necmettin Erbakan U.	There are no courses.			Showcase and Exhibition Design	E	T
				Limited Interiors and Furniture Design	E	T
Nevşehir Hacı Bektaş Veli University	Mobile Living Units	E	P	Fair Stand Design	E	T
	Window and Stand Design	E	P	Showcase and Stand Design	E	T
Ondokuz Mayıs U.	There are no courses.			Fair Stand Design	E	2T-2P
				Fair and Exhibition Areas	E	3T-2P
Osmaniye Korkut Ata U.	There are no courses.			Stage Design	E	1T-2P
Selçuk University	There are no courses.			There are no courses.		
Trakya University	There are no courses.			There are no courses.		
Yalova University	There are no courses.			Fair Stand Design	E	1T-2P
				Theatre Stage Design	EE	1T-2P
				Yacht Design I	E	2T-2P
				Yacht Design II	E	2T-2P
				Commercial Space and Showcase Design	E	T

Table 2. Courses for limited spaces in the Departments of Interior Architecture and Environmental Design: Foundation Universities (2022 and 2025)

University	2022 Courses			2025 Courses		
	Course Name	C/E	T/P	Course Name	C/E	T/P
Altınbaş University	There are no courses.			Wet Space Design	S	2T-2P
				Showcase Design	S	2T-2P
Ankara Bilim U.	There are no courses.			Modular Systems	S	T
				Wet Space Design	S	T
				Stage Design	S	T
Ankara Medipol U.	There are no courses.			There are no courses.		
Antalya Akev U.	There are no courses.			There are no courses.		
Antalya Belek U.				Fair Stand Design	E	T
				Kitchen and Bathroom Design	E	T
				Store-Showcase Design	E	T
Antalya Bilim U.	Fair Stand Design			Fair Stand Design	E	T
				Kitchen and Bathroom Design	E	T
				Showcase Design	E	T
				Stage Design	E	T

University	2022 Courses			2025 Courses		
	Course Name	C/E	T/P	Course Name	C/E	T/P
Atılım University	Fair Design			Fair Design	E	1T-2P
				Wet Space Design	E	2T-2P
				Stage Design	E	1T-2P
Avrasya University	Fairgrounds and Stand Design			Fairgrounds and Stand Design	E	T
				Stage Design	E	T
				Showcase Design	E	T
				Kitchen Design	E	T
Bahçeşehir U.	There are no courses.			There are no courses.		
Başkent University	There are no courses.	E	2T-2P	Interior Design in Vehicles	E	2T-2P
				Stage Design	E	2T-2P
				Wet Volume Design	E	2T-2P
Beykent University	There are no courses.			Yacht Interior Design	E	T
Beykoz University	Fair Stand Design	E	T	Showcase Design	E	T
	Design for Limited Spaces	E	T			
Biruni University	Interior Design in Vehicles	E	T	Interior Design in Vehicles	E	2T-1P
	Transportation Locations	E	T	Transportation Locations	E	T
Çankaya University	There are no courses.			Modular Systems	Z	T
Doğuş University	There are no courses.			Stage Design	E	T
				Small Space Design	E	T
				Stand Design	E	T
Fatih Sultan Mehmet Foundation U.	There are no courses.			Showcase Design	E	T
				Wet Volume Design	E	T
				Exhibition and Stand Design	E	1T-2P
Fenerbahçe U.	There are no courses.			Yacht Interior Design	E	T
Haliç University	Interior Designs in Mobile Homes	E	T	Interior Designs in Mobile Homes	E	T
	Boat Interior Design	E	T	Boat Interior Design	E	T
	Stand, Exhibition and Set Design	E	T	Stand, Exhibition and Set Design	E	T
				Showcase Design	E	T
				Wet Space Design	E	T
Hasan Kalyoncu U.	There are no courses.			Stand Design	E	1T-2P
				Wet Volume Design	E	1T-2P
				Stage Design	E	1T-2P
				Modular Systems	E	1T-2P
				Limited Interior Design	E	1T-2P
Işık University	There are no courses.			There are no courses.		
İhsan Doğramacı Bilkent U.	There are no courses.			There are no courses.		
İstanbul Arel University	There are no courses.			There are no courses.		
İstanbul Atlas U.	There are no courses.			Exhibition Design	E	T
İstanbul Aydın University	There are no courses.			There are no courses.		
İstanbul Ayvansaray U.	Stand Design	E	T	Stand Design	E	T
İstanbul Bilgi University	There are no courses.			Exhibition Design and Curatorial Practices	E	T
İstanbul Esenyurt University	There are no courses.			There are no courses.	E	
İstanbul Galata U.	There are no courses.			Stage Design	E	T
İstanbul Gedik U.	Yacht Interior Materials	E	T	Yacht Interior Materials	E	T
				Stage Design	E	T
				Modular Design	E	T
İstanbul Gelişim U.	Mobile Living Units			Mobile Living Units	E	T
	Showcase and Exhibition Stand Design			Showcase and Exhibition Stand Design	E	T
				Design of Exhibition and Performance Spaces	E	T
				Stage Design	E	T
İstanbul Kent University	There are no courses.			There are no courses.	E	

University	2022 Courses			2025 Courses		
	Course Name	C/E	T/P	Course Name	C/E	T/P
İstanbul Kültür University	Fairgrounds Design	E	T	Fairgrounds Design	E	T
	Boat and Yacht Design	E	T	Boat and Yacht Design	E	T
				Kitchen and Bathroom Design	E	T
				Stage Design	E	T
				Showcase Design	E	T
				Exhibition and Exhibition Space Design	E	T
Istanbul Medipol University	There are no courses.			Space Design on Yachts	E	T
İstanbul Okan University	Fair and Stand Design	E	T	Wet Volume Design	E	T
				Fair and Stand Design	E	T
İstanbul Rumeli University	Yacht Design	E	T	Yacht Design	E	T
				Showcase Design	E	T
				Exhibition and Stage Design	E	T
				Kitchen and Bathroom Design	E	T
				Wet Volume Design	E	T
				Trade Fair Showcase Spaces	E	T
İstanbul Sabahattin Zaim U.	Trade Fair Showcase Spaces	E	T	Store Design	E	T
				Interior Office Design	E	T
				Kitchen- Bathroom Design	E	T
				Stage Design	E	T
				Showcase and Exhibition Design	E	T
İstanbul Ticaret University	There are no courses.			Stage Design	E	T
				Stage and Set Design	E	T
İstanbul Topkapı University	There are no courses.			Stand Design	E	T
İstanbul Yeni Yüzyıl U.	There are no courses.			There are no courses.		
İstinye University	Fair Stand Design	E	T	Stage Design	E	T
İzmir Economy U.	Marine Interiors and Materials	E	T	Marine Interiors and Materials	E	T
Kadir Has University	There are no courses.			Small-Scale Interventions in Design	E	T
Kapadokya University	There are no courses.			Stage Design	E	T
				Wet Volume Design	E	T
Konya Food and Agriculture U.	There are no courses.			Stage Design	E	T
				Modular Systems	E	T
KTO Karatay U.	There are no courses.			Modular Design	E	T
				Showcase Design	E	T
				Fair and Stand Design	E	T
				Modular Design	E	T
Maltepe University	There are no courses.			Limited Space Design	E	T
				Universal Design in Ships and Yachts	E	T
				Yatch Interior Design	E	T
				Exhibition Design	E	T
Mef University	Yatch Interior Design	E	T	Kitchen and Bathroom Design	E	T
Nişantaşı University	There are no courses.			There are no courses.		
Nuh Naci Yazgan U.	There are no courses.			There are no courses.		
Ostim Technical U.	Interiors of the Future	E	T	Interiors of the Future	E	T
				Set and Stage Design	E	T
				Fair Design	E	T
Özyeğin University	There are no courses.			There are no courses.		
Ted University	There are no courses.			There are no courses.		
Tobb Economy and Technology University	There are no courses.			Modular Systems	E	T
				Stage and Set Design	E	T

University	2022 Courses			2025 Courses		
	Course Name	C/E	T/P	Course Name	C/E	T/P
Toros University	Modular Systems in Interior Design	E	T	Modular Systems in Interior Design	E	T
	Innovations in Contemporary Interior Design I	E	T	Innovations in Contemporary Interior Design I	E	T
	Innovations in Contemporary Interior Design II	E	T	Innovations in Contemporary Interior Design II	E	T
Yaşar University	Yatch Interior Design	E	T	Yatch Interior Design	E	T
	Commercial Space and Showcase Design	E	T	Commercial Space and Showcase Design	E	T
	Exhibition and Stage Design	E	T	Exhibition and Stage Design	E	T
Yeditepe University	There are no courses.			Stand Design	E	T

The data obtained in the third phase of the study were classified systematically and converted into visual representations. During the data visualisation process, RAWGraphs 2.0 and Flourish software were utilised to enable comparative evaluation of the analysis results. These tools enabled a comprehensive analysis of both the quantitative and qualitative dimensions of the data. In this context, the mandatory or elective nature of the courses offered at universities, their theoretical or practical structure, their differences in terms of continuity and innovation, and the dynamics of curriculum transformation were examined in detail. Furthermore, the most frequently offered courses were identified, and the status of these courses in provinces affected by the earthquake was evaluated under a separate heading. All data obtained were presented through graphical representations; in the final stage, findings for 2022 and 2025 were interpreted within the scope of a comparative analysis.

4. Findings

The findings indicate a clear increase in limited-space courses in both state and foundation universities between 2022 and 2025. In 2022, the number of departments offering these courses within state universities was 11 (f=11; 45.8%), while by 2025, this number is projected to rise to 19 (f=19; 79.1%). Similarly, in private universities, the number offering this course in 2022 was 18 (f=18; 32.1%), while in 2025 it reached 42 (f=42; 75.0%). The frequency and percentage distributions for university types are presented in Table 3.

In 2022, the number of courses on limited space offered at state universities was 16 (f=16; 24.2%), while by 2025, this number was 50 (f=50; 75.8%). At foundation universities, the number of courses offered in 2022 was 30 (f=30; 22.1%), while in 2025 it was 106 (f=106; 77.9%). The frequency and percentage distributions of course numbers by university type are shown in Table 4.

Table 3. Number of Universities offering courses on limited space by university type (2022–2025)

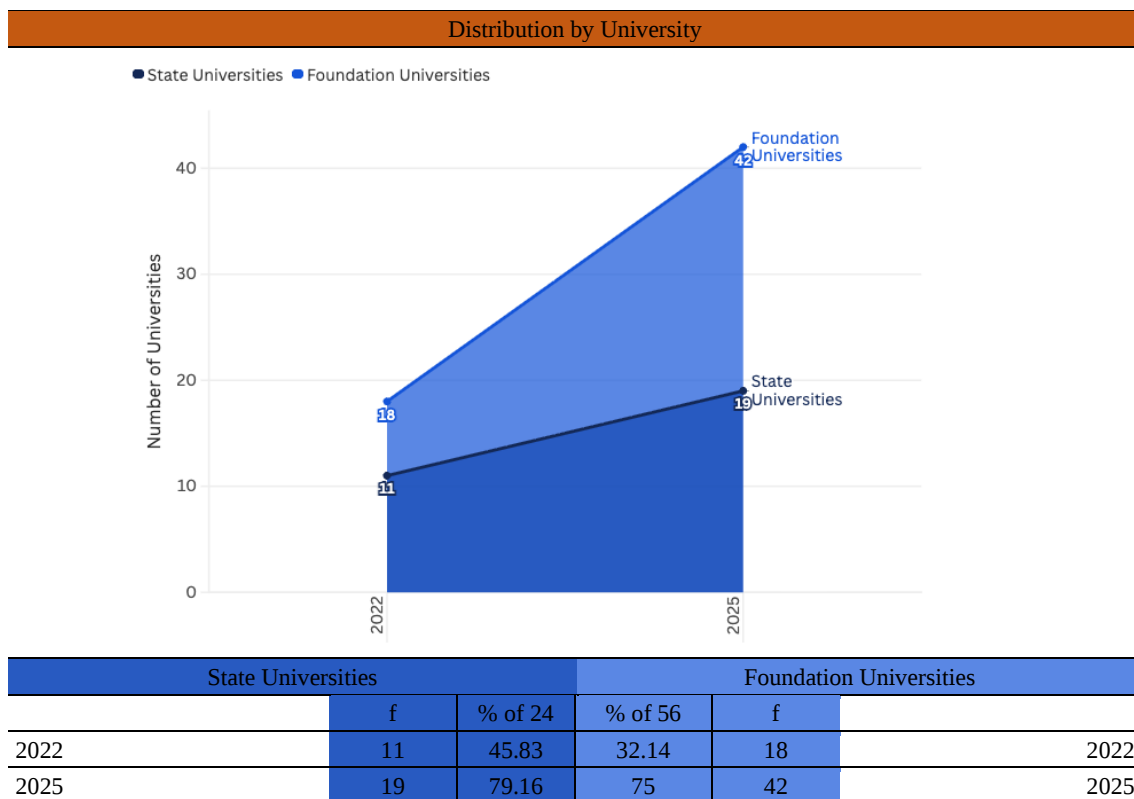
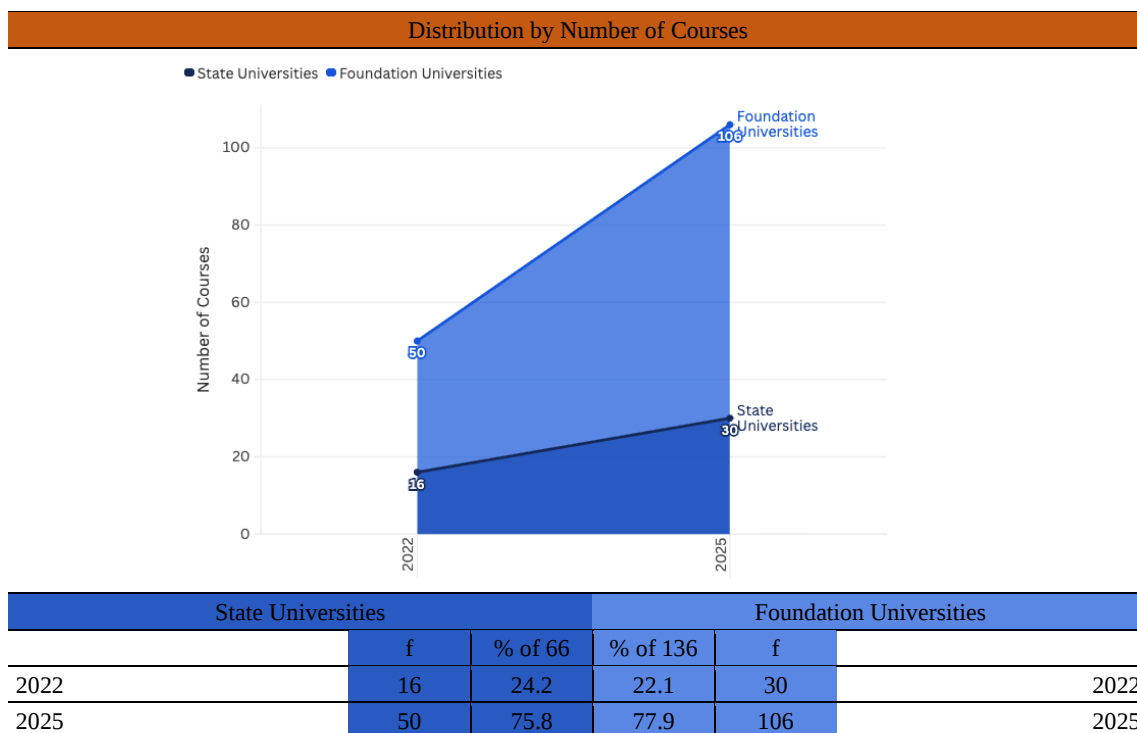
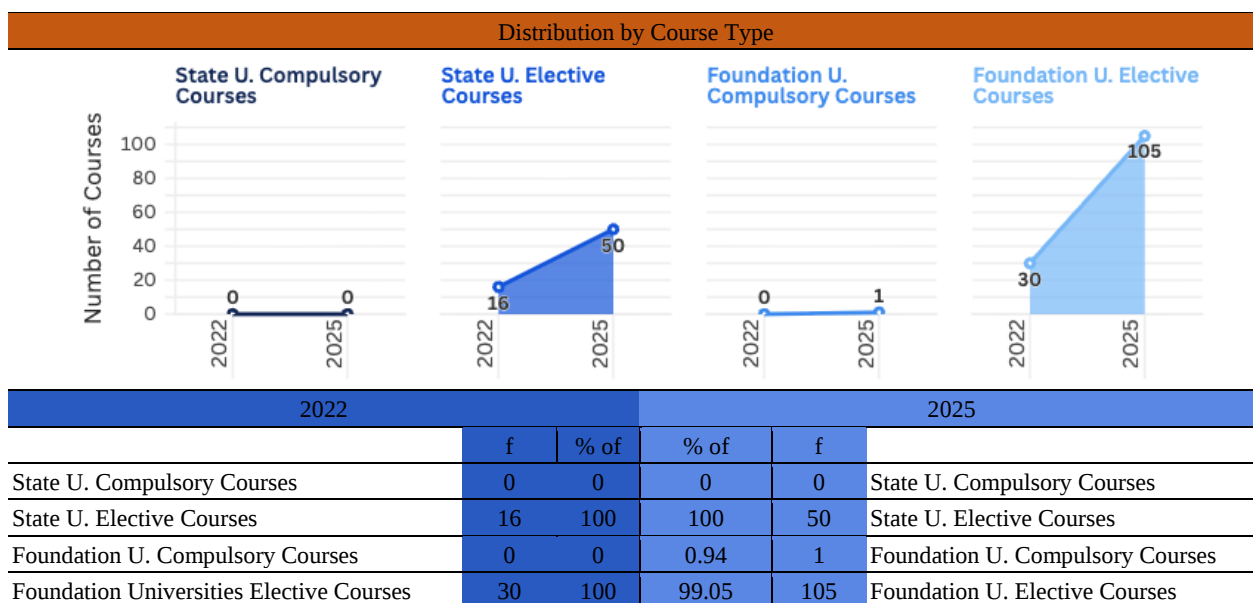


Table 4. Distribution of limited-space courses by university type (2022–2025)

In 2022, all courses on a limited space at state universities were electives (f=16; 100%). In the same year, it was observed that only elective courses were offered at foundation universities, with 30 such courses (f=30; 100%). By 2025, it was found that no compulsory courses were offered at state universities, while

the number of elective courses reached 50 (f=50; 100%). At foundation universities, one compulsory course was offered for the first time (f=1; 0.9%), alongside 105 elective courses (f=105; 99.1%). Table 5 shows the distribution of compulsory and elective courses by university type.

Table 5. Compulsory and elective courses in interior architecture and environmental design departments by university type (2022–2025)

When examining the types of courses offered at state universities in 2022, it was determined that the number of theoretical courses was 14 (f=14; 87.5%), and the number of theoretical+practical courses was 2 (f=2; 12.5%). There were no practical courses (f=0; 0%). At foundation universities, the number of theoretical courses was 28 (f=28; 93.3%), the number of theoretical and practical courses was 2 (f=2; 6.7%), and no practical courses were offered (f=0; 0%). By 2025, the number

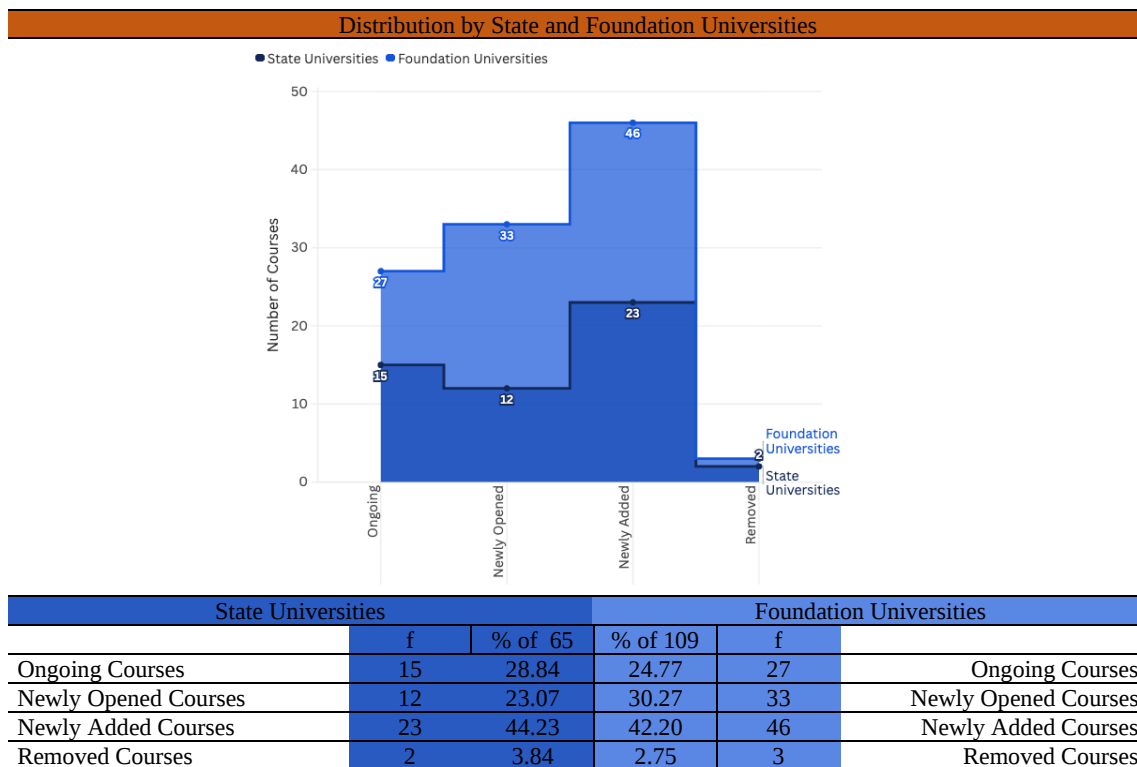
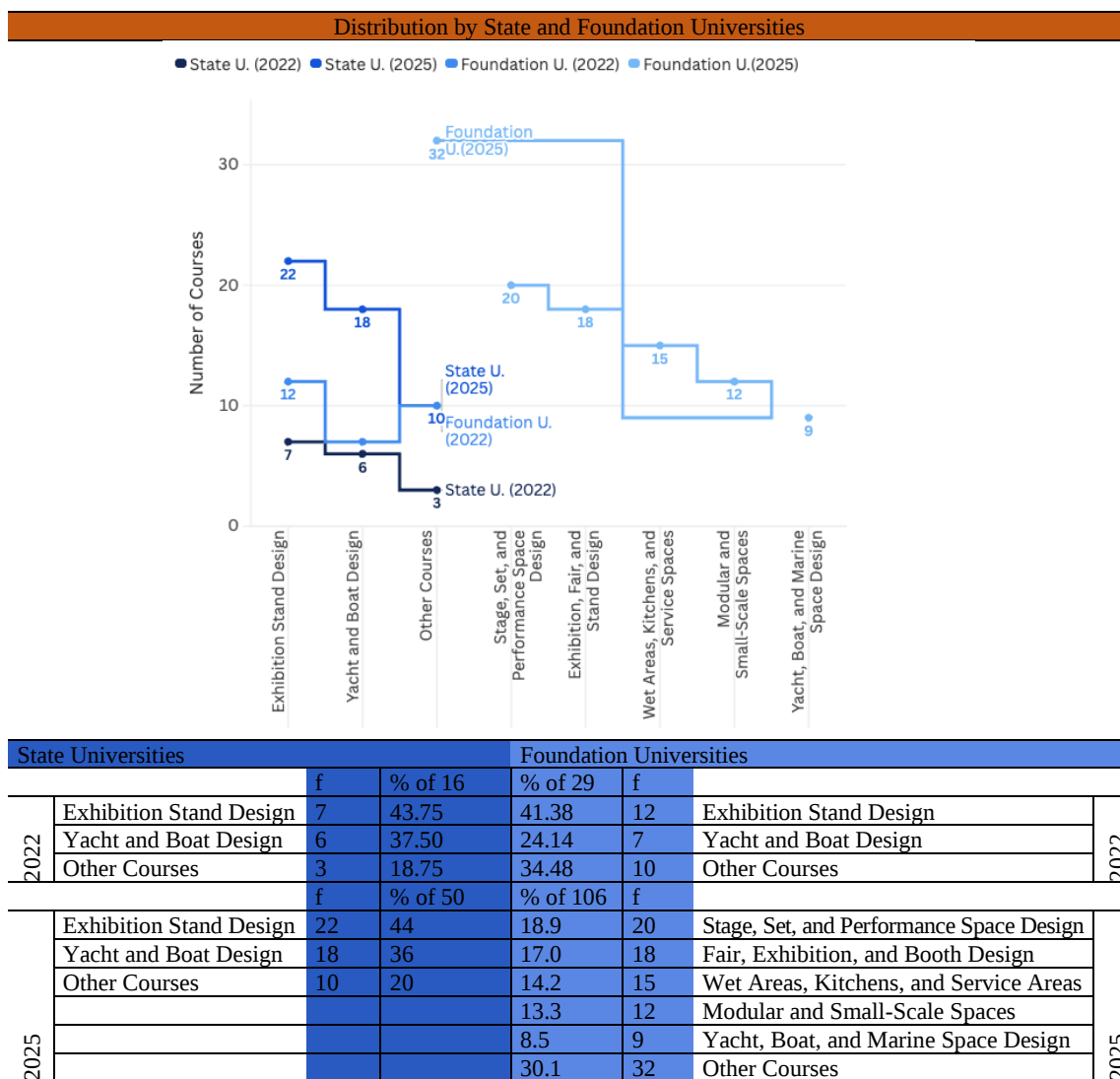
of theoretical courses at state universities was recorded as 32 (f=32; 64.0%), the number of theoretical+practical courses as 18 (f=18; 36.0%), and there were still no practical courses (f=0; 0%). In foundation universities, the number of theoretical courses was 91 (f=91; 85.8%), the number of theoretical and practical courses was 15 (f=15; 14.2%), and no practical courses were offered (f=0; 0%). Table 6 shows the distribution of theoretical and practical courses by university type.

Table 6. Theoretical and practical courses in interior architecture and environmental design departments by university type (2022–2025)

When the continuity and innovation status of limited space courses opened in state universities between 2022 and 2025 was examined, it was found that there were 15 ongoing courses ($f=15$; 23.1%), 12 newly opened courses ($f=12$; 18.5%), 23 newly added courses ($f=23$; 35.4%), and two discontinued courses ($f=2$; 3.1%). In foundation universities, during the same period, there were 27 ongoing courses ($f=27$; 21.6%), 33 newly opened courses ($f=33$; 26.4%), 46 newly added courses ($f=46$; 36.8%), and three discontinued courses ($f=3$; 2.4%). In this study, ‘ongoing courses’ refer to courses that existed in both the 2022 and 2025 curricula without major thematic changes. ‘Newly opened courses’ indicate courses introduced by departments that previously had no limited-space-related courses, whereas ‘newly added courses’ refer to additional limited-space-themed courses incorporated into already existing curricula after 2022. Table 7 shows the Continuity and Innovation Status of the Courses.

Table 8 shows the thematic distribution of courses at state universities in 2022. Courses were grouped into three thematic categories based on content similarity: “Fair and Booth Design”, “Yacht and Boat Design”, and “Other Courses”. This included the courses “Space Design in Limited Spaces,” “Vehicle Interior Design,” and “Mobile Living Units,” each of which was repeated only once. “Exhibition Stand Design” themed courses had the highest repetition rate, with seven occurrences (43.75%). “Yacht and Boat Design” themed courses followed with six occurrences (37.50%). The “Vehicle Interior Design,” “Space Design in Limited Spaces,” and “Mobile Living Units” courses, included in the “Other Courses” category, accounted for three occurrences

(18.75%). These findings suggest that as of 2022, courses at state universities were primarily focused on exhibition/stand design and yacht/boat design, while other courses held a limited place in the curriculum. The 2025 course data were also classified into three thematic categories: Exhibition and Stand Design, Yacht and Boat Design, and Other Courses. Courses including “fair,” “stand,” “showcase,” and “exhibition” themes were grouped as “Courses Related to Fair and Stand Design.” This group includes courses such as Fair and Stand Design, Stand Design, Showcase and Stand Design, Exhibition Showcase Design, Exhibition and Spatial Design in Exhibition, and Exhibition Design and Fair and Promotion Stands. This theme constitutes the most concentrated course category in the 2025 data. Courses related to yachts and boats were classified under “Yacht and Boat Design.” This theme comprises the courses Boat Interior Design, Yacht Design, Yacht Design I-II, Yacht Interiors Design, Basic Principles of Yacht Design, Yacht Spatial Design, and Yacht Interior Design and Design Management, and this theme constitutes the second concentrated area. Remaining courses were grouped as “Other Courses.” This group includes courses addressing different spatial scales, such as stage, residential, and commercial design. This theme covers a variety of courses, primarily for stage, residential, and commercial interior design. Exhibition and stand design courses constitute the largest thematic group, with 22 occurrences (44.00%) in state universities. This group is followed by “Stage and Other Space Design” themed courses 18 times (36.00%), and “Yacht and Boat Design” themed courses are represented 10 times (20.00%).

Table 7. Continuity and innovation status of limited space themed courses (2022–2025)

Table 8. Frequency and percentage distributions of the most repeated courses (2022–2025)


Similarly, foundation university courses were grouped into: Courses on Fair and Stand Design, Courses on Yacht and Boat Design, and Other Courses.

In this context, there are courses such as Fair Stand Design, Fairgrounds and Stand Design, Trade Fair Exhibition Area, Exhibition and Stage Design. This theme had the highest repetition rate (25.00%) in foundation universities in 2022. This group, consisting of courses such as Yacht Design, Boat and Yacht Design, Yacht Interior Design, and Marine Interior Structures and Materials, accounted for 14.58%. Courses outside the main themes are grouped under the "Other Courses" heading. This category includes courses such as Interior Design in Vehicles, Mobile Living Units, Future Interiors, and Modular Systems in Interior Design, and the total rate is calculated as 20.83%. The 2025 courses in foundation universities were classified into five thematic groups: Stage, Set and Performance Space Design, Fair, Exhibition and Stand Design, Wet Area, Kitchen and Service Spaces, Modular and Small-Scale Spaces, Yacht, Boat and Marine Space Design and other courses are evaluated under the title of "Other Courses". In this context, there are courses such as Stage Design, Stage and Set Design, Set and Stage Design, Exhibition and Stage Design, and Stage Design. This theme has the highest level of representation in the 2025 data, with a rate of 20 repetitions (18.9%). Course names containing the concepts of "fair", "stand", "showcase", and "exhibition" were evaluated under the title of "Fair, Exhibition and Stand Design". In this context, there are courses such as Exhibition Stand Design, Exhibition Areas and Stand Design, Trade Fair Exhibition Area, Exhibition and Exhibition Spaces Design, Showcase Design, Exhibition Design, Showcase and Fair Stand Design, and Exhibition and Performance Spaces Design. This group ranks second with a rate of 18 repetitions (17.0%). This group, consisting of courses such as Wet Area Design, Wet Space Design, Kitchen and Bathroom Design, Wet Area Design, and Kitchen-Bathroom Design, accounted for 15 repetitions (14.2%). Another group includes modular and small-scale spatial design courses. In this context, Modular Systems, Modular Design, Limited Interior Design, Small Space Design, Limited Space Design, and Small-Scale Interventions in Design courses are included. This theme has a 12-repetition rate (11.3%). Course names containing the concepts of "yacht", "boat", "marine", "ship", and "yacht" were evaluated under the title of "Yacht, Boat and Marine Space Design". In this context, the following courses were included: Boat and Yacht Design, Yacht Interior Design, Space Design in Yachts, Marine Interior Structures and Materials, and Universal Design in Ships and Yachts, totalling nine repetitions (8.5%). The remaining courses were grouped under "Other Courses". This category includes various interior design topics across different spatial scales, and a total of 32 repetitions (30.1%) were included. The findings show that as of 2025, courses at foundation universities are particularly focused on stage and performance space design. In addition, it is seen that fair- and exhibition-themed courses are well represented, while wet-area, modular systems, and maritime-themed (yacht/boat) courses are more limited but distinct themes.

The course-opening status of state and foundation universities in 11 provinces affected by the earthquake was examined over the years 2022–2025. Regarding state universities, no courses were opened in any province in 2022 ($f=0$; 0%). In 2025, courses with limited space were opened in Hatay ($f=1$; 5.26%) and Osmaniye ($f=1$; 5.26%). Regarding foundation universities, no courses were opened in any of the 11 provinces examined in 2022 ($f=0$; 0%). In 2025, it was

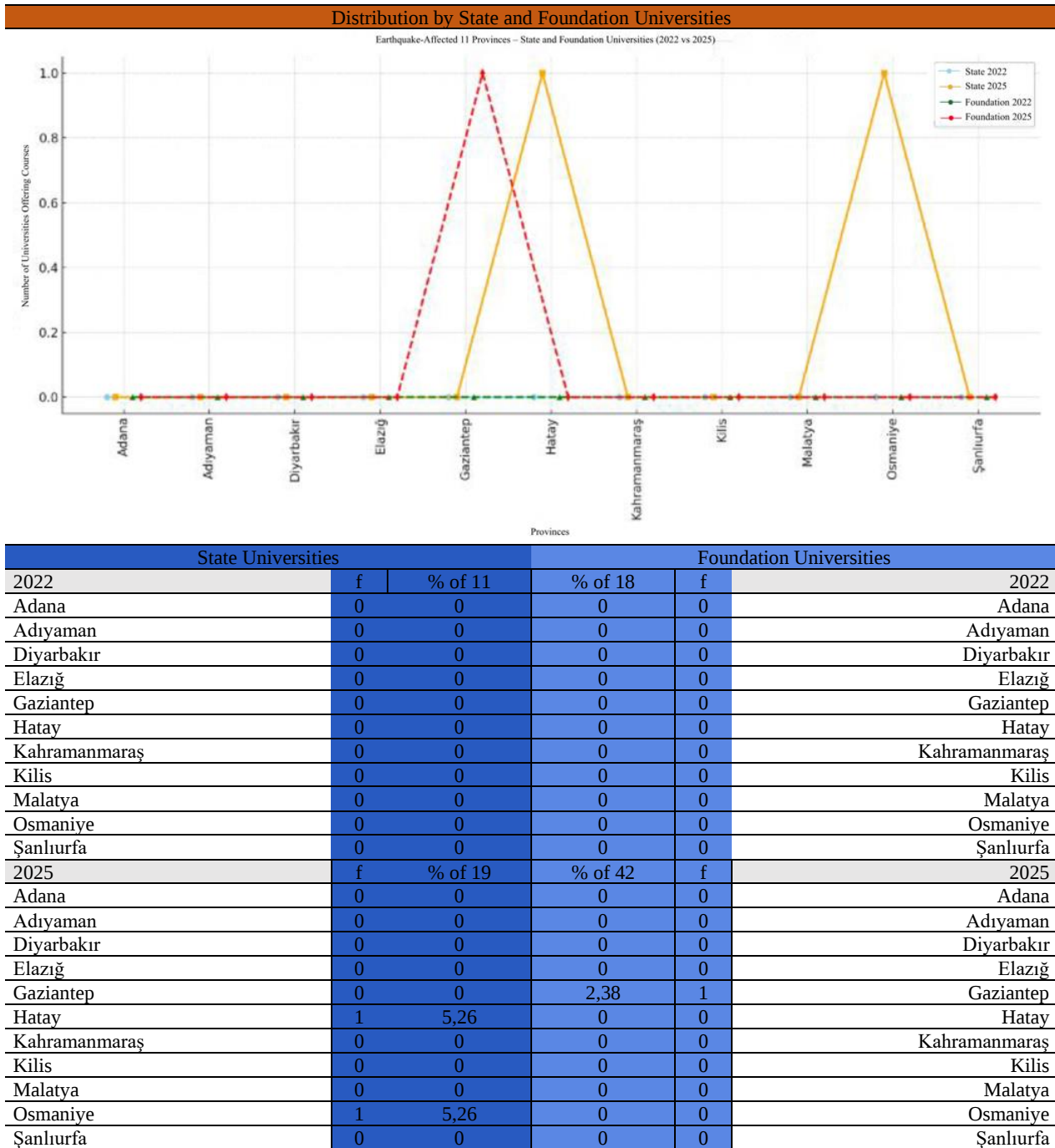
determined that courses with limited space were opened only in Gaziantep province ($f=1$; 2.38%). Thus, it was determined that no courses were opened in either state or foundation universities in the provinces affected by the 2022 earthquake. By 2025, it appears that courses were offered, albeit in limited numbers, at state universities in Hatay and Osmaniye and at foundation universities in Gaziantep. Analysing 2025 data reveals that İskenderun Technical University in Hatay offered the courses "Bathroom Design," "Kitchen Design," "Exhibition Stand Design," "Micro Housing Design," and "Mobile Housing." In Osmaniye, Osmaniye Korkut Ata University offered the course "Stage Design." In Gaziantep, Hasan Kalyoncu University offered the courses "Stand Design," "Wet Area Design," "Stage Design," "Modular Systems," and "Limited Interior Design." Table 9 compares the course offerings at universities in earthquake-affected regions between 2022 and 2025.

Research has identified a relative shift in university curricula following the earthquake, with a focus on limited spaces. However, this is insufficient for the current situation. As the findings suggest, courses in Interior Architecture departments focused entirely on commercial structures and products (fairs, exhibitions, mobile structures, etc.) and were weakly socially focused. This tendency may also influence how the discipline is publicly perceived within the broader social context.

5. Conclusion and recommendations

Findings reveal a significant increase in limited-space courses in interior architecture programs between 2022 and 2025. This increase reflects the need to adapt educational programs to post-disaster conditions, particularly following the earthquake that occurred on February 6, 2023. Post-earthquake conditions have heightened the importance of modular, flexible spatial design in interior architecture education. However, the key point here is not to raise awareness of these structures after the earthquake or to increase professionals' knowledge and experience in earthquake- and disaster-housing design, but rather to address commercial concerns. The increase in courses, generally focused on electives, and the fact that mandatory courses on disaster housing and earthquake-related keywords have not yet been offered constitute a significant shortcoming for interior architecture education in our country, which has experienced such a disaster.

Most courses offered at state universities are electives, while at foundation universities, a compulsory course was added to the curriculum for the first time in 2025. The fact that this flexible structure at state universities is driven by an infrastructure focused on elective courses demonstrates that, despite this flexible structure, current issues are not given due importance. Foundation universities appear to be expanding elective courses to diversify their curricula. Furthermore, the findings on course types show that theoretical courses remain predominant. However, by 2025, there was a significant increase in the ratio of theoretical + applied courses across both public and foundation universities. This trend indicates that students are directed towards a learning process based not only on theoretical knowledge but also on practical applications.

Table 9. Comparison of course offering status of universities in earthquake-affected regions, 2022–2025

When the most repeated courses are analysed, it is found that ‘exhibition stand design’ stands out in both public and foundation universities. In addition, courses such as yacht design, showcase design, modular systems and kitchen and bathroom design are also prominent. This trend reflects the growing demand for flexible and modular spatial design skills. In addition, as mentioned before, it can also be associated with the perception that the profession ‘appeals to the commercial and upper class’. An examination of the 11 provinces affected by the earthquake points to an important differentiation. While in 2022 no courses were offered in any province, in 2025 it was determined that courses were offered in Hatay, Osmaniye, and Gaziantep, albeit in limited numbers. This situation shows that the importance of limited spaces in spatial planning in the post-disaster period is recognised, but this awareness is not reflected in the training programmes in a widespread and holistic manner. In addition,

considering the general structure of the country and the frequency of earthquakes, being limited to the cities that have experienced the earthquake and its destructive effects most recently indicates a limited view and an inadequate approach. These courses should be made compulsory and a permanent part of the curriculum throughout the country. At least until the deaths and destruction caused by earthquakes in the country are reduced to a minimum level, it is imperative that this reality is included in the education system.

Considering these findings, it is imperative to develop recommendations to shape future educational programs more effectively and comprehensively.

- Training in Constrained Space Design Based on Disaster Scenarios: In courses focused on constrained spaces, studio work should be conducted on post-disaster temporary shelter scenarios (containers, modular housing,

micro-living units, etc.). Students should be encouraged to incorporate not only space optimisation but also disaster-specific criteria such as thermal comfort, privacy, hygiene, accessibility, and psychosocial recovery into the design process. This will transform constrained-space design into a multidimensional educational space that shapes quality of life after a disaster.

- **Modularity and Adaptability-Based Curriculum Development:** The concept of limited space also encompasses the potential for transforming spaces according to changing needs. Post-disaster shelter processes are the most concrete situations that test the applicability of this modularity on a social scale. Therefore, the curriculum should develop applied projects on portable, removable, multifunctional, and scalable module systems. This approach will strengthen flexible design practices for both post-disaster temporary spaces and permanent living units.
- **On-site Observation and Workshop Activities in Disaster Areas:** Limited space design courses should be supported by field studies conducted in disaster areas. It is crucial for students to observe user experience in real-scale spaces such as tent cities, container settlements, or temporary educational structures, both in terms of empathetic awareness and design reality. Such field-based studies will ensure that academic production does not remain purely theoretical and that it translates into social benefit.
- **Interdisciplinary Collaboration and Simulation-Based Education:** Addressing post-disaster living scenarios in limited spaces requires education conducted jointly with different disciplines such as engineering, psychology, ergonomics, urban planning, and health. In this context, disaster-based virtual space scenarios should be created using digital simulation, virtual reality (VR) and augmented reality (AR) applications, enabling students to analyse user behaviour in confined spaces. This makes the design process experiential and allows students to observe the effects of confined spaces on people in a concrete way. Additionally, students will have the opportunity to test and revise the functionality of their spatial designs during disasters.
- **Addressing Limited Spaces from a Social Resilience Perspective:** Limited spaces are not only physical boundaries but also spatial representations of social resilience. The ability of individuals to maintain their social ties in temporary settlements after a disaster is critical in terms of the design of shared spaces and community dynamics. Therefore, lessons should develop projects on collective living concepts, community spaces, and shared space organisation. Thus, the concept of limited space will be evaluated not only in terms of shelter but also in terms of social recovery.
- **Making Limited Space Education Mandatory at the Policy Level:** In a geography prone to frequent disasters, limited space design should no longer be an elective specialisation but defined as a mandatory professional qualification at the national level. The Higher Education Council (YÖK) should ensure that all interior architecture programmes include at least one compulsory course entitled 'Disaster and Limited Space Design'. This step will enable interior architecture education to undergo

a transformation based not only on aesthetics or technical skills, but also on social responsibility.

As a result, the phenomenon of limited space emerges as a determining factor in both the physical and emotional sustainability of post-disaster life. Although it is an important progress for educational institutions to make this theme more visible after the February 6, 2023, earthquakes, this orientation needs to be transformed into a permanent, systematic, and mandatory education policy. Constrained space design should be positioned at the intersection of disaster awareness, social resilience, and spatial recovery; interior architecture education should cultivate professionals who are prepared for future crises, sensitive, and solution-oriented. Therefore, this study aims to highlight what needs to be done, signal urgency, and serve as the first step toward initiating change.

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