The Status of Color-Oriented Courses in Undergraduate Interior Architecture Curricula: A Curriculum-Based Analysis

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Article Info	Abstract
	Interior architecture is a professional field frequently engaged by users in the process of creating spaces, and it has become an indispensable practice of contemporary life. In line with this growing demand, the number of higher education institutions offering interior architecture programs has also rapidly increased. This study focuses on the role of color, one of the fundamental design tools in interior architecture, within interior architecture education. The aim is to conduct a quantitative analysis of curricula and determine the current status of courses focusing on color in interior architecture programs in Türkiye. While each discipline requires its own unique educational content and qualifications, individuals working within the same professional field are expected to acquire similar fundamental knowledge and skills. In this context, the primary objective of the study is to emphasize the importance of color in undergraduate education programs, given its pivotal role in the interior architecture discipline. To this end, the study examined factors such as the presence of color courses in the programs, their status as elective or required, and the semesters in which they are offered, and evaluated course content within the framework of accreditation criteria and relevant literature. The data were analyzed using qualitative research methods and document analysis techniques. Based on information from the Higher Education Council of Türkiye (YÖK) Undergraduate Atlas, official university websites, and course information packages, the study aims to propose a shared educational framework aligned with contemporary requirements.

1. INTRODUCTION

Interior architecture encompasses the arrangement of spaces to meet user needs, the provision of spatial comfort, and the creative design process of form, texture, color, material, lighting, furnishings, and accessories by the interior architect [1]. In this context, interior architecture is not merely a physical arrangement but a design discipline that guides user experience and perception. The designer shapes the space by considering the user's perception, emotions, and behaviors; thus, the interior architect's work is not a single object but the entirety of the space.

Interior architecture education is also shaped by this holistic perspective. Emphasizing creativity, the discipline is strongly linked to art education and is supported by foundational art courses in the early years. These are delivered within an integrated curriculum alongside core design courses. This structure places interior architecture education on common ground with other disciplines in the field of art and design.

In Türkiye, undergraduate programs in Interior Architecture or Interior Architecture and Environmental Design admit students through a centralized placement system, based on quantitative or equal-weight scores [2]. However, the profession and educational content are closely related to design and fine arts. Therefore, a lack of knowledge and engagement with the arts can be considered a significant deficiency in the professional competence of an interior architect. Historically, interior architecture education has developed in close connection with art and craft, evolving into its current academic structure [3].

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In this framework, color emerges as a fundamental component in both art education and the profession and education of interior architecture. The subject of color is not limited to basic education or foundational art and design courses; it is also a key element in studio courses, which are central to interior architecture education. This is because color is one of the core design elements that directly affect spatial perception and user experience. Therefore, including color education in the undergraduate interior architecture curriculum is essential for professional qualification. However, courses do not always aim solely to teach color; rather, color is often addressed as one component within a broader design process. In studio and design courses, color is considered as part of the design development, but this is often limited to the context of the project, without sufficient emphasis on theoretical knowledge and methods [4]. This highlights the necessity of addressing color as a distinct and focused course. Accordingly, this study examines the role of color education in undergraduate interior architecture programs by analyzing only the courses specifically titled with "color."

Although color is widely recognized as a fundamental element in design education, there is limited research systematically examining how it is incorporated into undergraduate interior architecture curricula in Türkiye. Existing studies have primarily focused on general design principles or studio practices, leaving the role of color education underexplored. This study addresses this gap by conducting a systematic analysis of 106 programs and 99 courses, providing a comprehensive overview of the current status of color education. By mapping the presence, type, and content of color-related courses across interior architecture programs, the research offers an original contribution that can guide curriculum development in line with contemporary needs and accreditation standards.

In this study, undergraduate curricula of Interior Architecture and Interior Architecture and Environmental Design programs in Türkiye were systematically examined, and these departments were evaluated together and are collectively referred to throughout the text as 'interior architecture departments.' Courses related to the theme of "color" were identified, and their presence, status as required or elective, and the semester in which they are offered were determined. Data were collected from the Higher Education Council of Türkiye (YÖK) Undergraduate Atlas, official university websites, and course catalogs. Courses containing the term "color" were identified and classified as compulsory or elective. The data were analyzed quantitatively using tables and graphics, and course contents were evaluated qualitatively through document analysis, based on accreditation criteria and relevant literature. This comprehensive study aims to support the development of a common educational framework that aligns with contemporary needs.

2. METHOD

This research is a qualitative case study that aims to analyze the current status of color-focused courses in the curricula of interior architecture departments undergraduate programs in Türkiye. A qualitative research method was adopted, using document analysis as the primary technique. Additionally, certain data were classified quantitatively and supported through visualizations such as tables and graphs.
The data were collected from the YÖK Undergraduate Atlas and from course catalogs, curricula, and syllabi published on the official websites of universities. Color-related courses were identified through the presence of the term "color" in their titles. The objectives and learning outcomes of these courses were analyzed using content analysis, guided by predefined key concepts (e.g., color knowledge and theory, color perception, color harmony). To ensure reliability, the data was recoded by the researchers after a two-week interval, and discrepancies were resolved. Following the coding process, the courses were classified and visualized based on their status as required, elective, or major elective, as well as the semesters in which they were offered, using tables and graphs. This structured process, summarized in Table 1, enabled the identification of trends and patterns in the integration of color education across interior architecture programs.

Table 1. *Research Process and Steps*

Step	Title	Description
1	Identification of Relevant Undergraduate Programs	Identification of Interior Architecture / Interior Architecture and Environmental Design undergraduate programs in Türkiye, based on data from the YÖK Undergraduate Atlas.
2	Identification of Color-Themed Courses Based on Curricula	Examination of course information forms, curricula, and syllabi available on the official websites of universities; inclusion of courses with the explicit term "color" in their titles.
3	Classification and Visualization of Data	Visualization of the collected data through tables and graphs according to course status (required/elective) and semester; analysis of course content within the framework of accreditation criteria and relevant literature.
4	Coding of Course Data	Analysis of course objectives and learning outcomes using content analysis; coding based on predefined key concepts (e.g., color knowledge, color perception, color harmony, color-space relationship).
5	Ensuring Coding Reliability	Coding carried out by the researchers and subsequently reviewed to ensure consistency.
6	Interpretation of Results and Proposal of an Educational Framework	Proposal of a common educational framework for color instruction in line with contemporary requirements, based on the findings.

The collected data were analyzed in two dimensions. First, the distribution of color-related courses by university, their elective or required status, and their placement within the curriculum were evaluated through quantitative methods. Second, the content of these courses was analyzed qualitatively based on accreditation criteria and relevant literature. This analysis aimed to reveal the role and adequacy of these courses within interior architecture education.

The study was conducted to contribute to the development of a unified educational framework that meets contemporary needs and promotes interdisciplinary coherence.

3. THE STATUS OF COLOR-ORIENTED COURSES IN UNDERGRADUATE INTERIOR ARCHITECTURE CURRICULA

Before formal interior architecture education, vocational training was provided through a traditional Turkish guild system known as Ahilik, which relied on a hands-on approach through apprenticeship (*çıraklık*) and journeyman (*kalfalık*) stages. After an apprenticeship period lasting five to seven years, individuals could advance to the journeyman level upon passing a practical examination [5]. What is considered the beginning of today's formal interior architecture education in Türkiye is the establishment of the Department of Interior Decoration (Dâhili Tezyinat Bölümü) in 1923, within the School of Fine Arts Academy (Güzel Sanatlar Akademisi)—then known as *Mekteb-i Sanâyi-i Nefîse-i Şâhâne*, which was renamed in 1928 and is today called Mimar Sinan Fine Arts University. This department was built upon the foundations of the Decoration Department (Tezyinat Bölümü), established in 1914 [3]. In 1955, the Applied Fine Arts School (Tatbiki Güzel Sanatlar Yüksekokulu), affiliated with Marmara University, became the second major institution to offer interior architecture education, following the Fine Arts Academy. Until the 1980s, these two institutions were the only ones providing such education. Later developments included the establishment of programs at Hacettepe University in 1985 and at İhsan Doğramacı Bilkent University—Türkiye's first foundation university—in 1987 [6].

With the increase in the number of higher education institutions in Türkiye, undergraduate programs in interior architecture have expanded rapidly. Today, interior architecture education is offered under the departments of "Interior Architecture" and "Interior Architecture and Environmental Design." As of the official directive issued by the Higher Education Council of Türkiye (YÖK) on September 5, 2016 (Ref. No: 75850160-301.01.04-56126), student admissions to these programs—including those at Mimar Sinan Fine Arts University and Marmara University—have shifted from special talent examinations to the centralized university entrance system. Under this system, students are placed into Interior Architecture programs based on their quantitative (MF-4) scores, while those applying to Interior Architecture and Environmental Design programs are admitted based on their equal-weight (TM-1) scores [7].

According to the 2017 Undergraduate Programs and Quotas Guide of the Student Selection and Placement Examination (ÖSYS), there were 57 undergraduate programs in interior architecture departments—13 at public universities and 44 at foundation (private) universities. By 2020, this number had increased to 70. Alongside this, the presence of both "interior architecture" and "interior architecture and environmental design" programs within either the same or different faculties at some institutions raised the total number of departments to 73 [5,6].

An examination of the 2024 Undergraduate Programs and Quotas Guide of the Higher Education Institutions Examination (YKS) shows that the number of undergraduate programs offering interior architecture education continues to rise rapidly. As of 2024, there are 106 such programs offered by 88 universities (Figure 1). Of these, 49 are titled "Interior Architecture." Among them, 20 are offered by public universities and 29 by foundation (private) universities. The remaining 57 programs are titled "Interior Architecture and Environmental Design," of which 6 are housed in public universities and 51 in foundation (private) universities. In total, of the 106 programs, 26 are offered at public universities and 80 at foundation (private) universities [2].
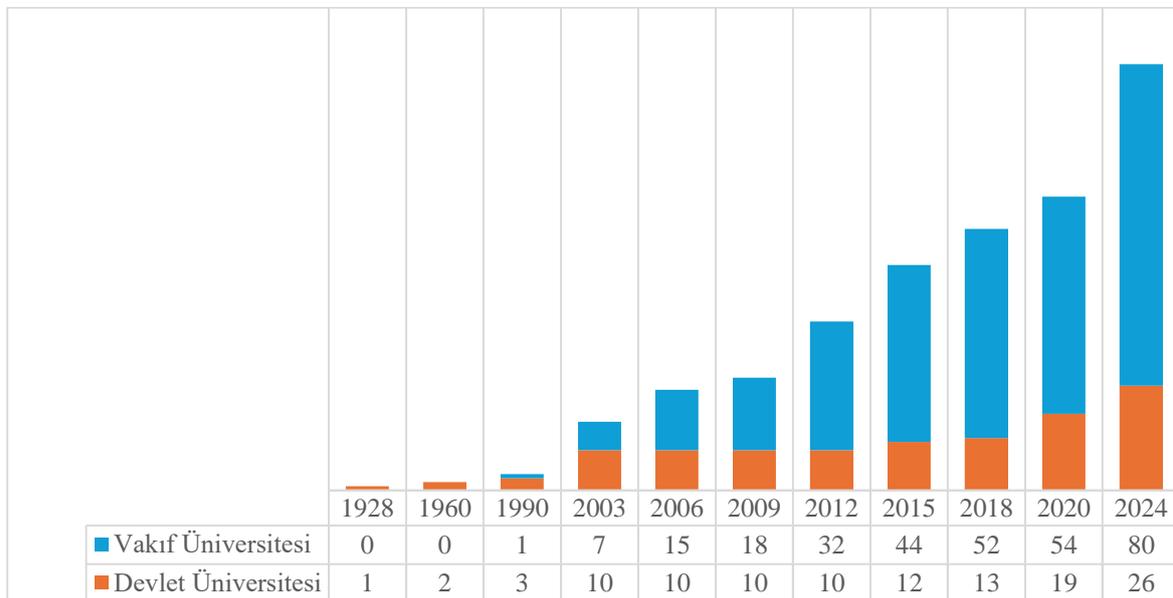
	1928	1960	1990	2003	2006	2009	2012	2015	2018	2020	2024
■ Vakıf Üniversitesi	0	0	1	7	15	18	32	44	52	54	80
■ Devlet Üniversitesi	1	2	3	10	10	10	10	12	13	19	26

Figure 1. *Distribution of Higher Education Institutions Offering Interior Architecture Programs in Türkiye up to 2024*

When comparing the 2020 data obtained by Erbay and Ulusoy (2021) with the data from 2024, it is concluded that the number of interior architecture departments increased by 45.21% over the four-year period. The rate of increase over the years indicates that the number of these departments is likely to continue growing in the coming years.

An examination of the faculties to which the interior architecture departments are affiliated reveals that these departments are grouped under 14 different faculties. Table 2 shows the faculties to which these departments belong, indicating that the majority of interior architecture departments are housed within the Faculty of Architecture. This is followed by the Faculty of Architecture and Design with 15 departments, and the Faculty of Engineering and Architecture with 12 departments. When the "Faculty of Fine Arts, Design and Architecture" and the "Faculty of Architecture, Design and Fine Arts" are considered together, these faculties also rank among those with a high number of related departments, totaling 15.

Tablo 2. *Faculties Affiliated with Interior Architecture Departments*

	Faculty Name	Number of Departments
1	Faculty of Architecture	23
2	Faculty of Architecture and Design	15
3	Faculty of Art, Design and Architecture	7
4	Faculty of Fine Arts	9
5	Faculty of Art and Design	8
6	Faculty of Engineering and Architecture	12
7	Faculty of Fine Arts and Design	6
8	Faculty of Fine Arts, Design and Architecture	11
9	Faculty of Architecture, Design and Fine Arts	4
10	Faculty of Fine Arts and Architecture	3
11	Faculty of Engineering and Natural Sciences	4
12	Faculty of Arts and Social Sciences	2
13	Faculty of Design	1
14	Education and Research Campus (Famagusta)	1
	Total	106

In Özsavaş's (2015) study, the number of departments within the Faculty of Architecture was reported as 12. Compared to the data from 2015, it is observed that by 2024, the number of interior architecture departments within the Faculty of Architecture has increased by 91.67%. Conversely, the number of departments within the Faculty of Fine Arts has decreased by 2024.

Although the Higher Education Council of Türkiye (YÖK) proposed in 2019 that Interior Architecture—along with departments such as Fashion Design, Stage Design, Industrial Product Design, and Textile—should be placed under the Faculty of Arts and Humanities [8], recent data from 2024 reveal that Interior Architecture departments continue to exist under different faculties. This reflects an ongoing institutional diversity in how the discipline is positioned, which may, in turn, shape the way educational content—such as color-related courses—is framed within various programs.

The presence of interior architecture departments under various faculties highlights the multidisciplinary nature of the field. Until 2016, differences were observed in student admission types and faculty affiliations for interior architecture departments. It will be examined whether these structural variations also contribute to diversity in the current status of color courses. Accordingly, the study first investigates color courses within interior architecture education.

3.1. The Role and Importance of Color Education in Undergraduate Interior Architecture Programs

Interior architecture programs in Türkiye admit students through the centralized placement exam using quantitative and equal-weight score types; however, the field is also defined in relation to design and fine arts in terms of education and professional practice. For an interior architect as a designer, being disconnected from the arts and its knowledge means lacking essential information needed for the profession. Interior architecture education has evolved intertwined with art and craft to reach its current academic structure.

Since the 19th century, with the establishment of modern art schools such as the École des Beaux-Arts—which began dividing art education into disciplines like painting, sculpture, and architecture—and the Bauhaus—which combined art, craft, and architecture and centered the creative process—interior architecture education has become more systematic. The Bauhaus pedagogy was supported by color theories and composition studies practiced in Johannes Itten's workshops, demonstrating that art education and desıgn processes are inseparable [4].

The topic of color holds a significant place as a fundamental component in undergraduate interior architecture education. Consequently, it is included either directly or indirectly in the curricula of many interior architecture programs. Color is addressed not only within the content of various courses but also

as an important design element in project courses, which are among the most comprehensive in the field. As one of the basic design elements used in the design process, color plays a decisive role in the formal, functional, and perceptual unity of interior architecture projects. This importance arises because color is a core design element in the design process and constitutes a substantial part of interior architectural projects.

However, the primary aim of these courses is often not solely to teach color; rather, color is integrated as a component within the overall design process. Therefore, in this study, the role of color in interior architecture undergraduate education has been examined exclusively by focusing on courses explicitly titled under the subject of "color."

Organizations such as the Interior Design Educators Council (IDEC), the Council for Interior Design Accreditation (CIDA), the Union of Chambers of Turkish Engineers and Architects (TMMOB) Chamber of Interior Architects, and TAPLAK (Design and Planning Accreditation Association) serve as international and national bodies dedicated to education, profession, and accreditation in the field of interior architecture and design. Their mission is to develop interior architecture as a profession and discipline, establish standards, and improve professional practice.

The important role of color in undergraduate interior architecture education is also supported by international education standards. In particular, color is addressed as a separate criterion within the standards set by CIDA—an international organization established to assure the quality of educational programs and professional competencies—and TAPLAK, which serves at the national level.

CIDA, established to accredit educational programs, aims to define and enhance standards for interior architecture education. In line with this mission, CIDA updated and published its professional standards in 2024, presenting them under the headings "Program Identity and Context" and "Knowledge Acquisition and Application." The topic of color appears as criterion 12 under the "Knowledge Acquisition and Application" category, encompassing both light and color (Table 3). This standard seeks to ensure that graduates understand the art and science of light and color and are able to integrate these elements into the design process to enhance human experience [9].

***Table 3.** CIDA Professional Standards 2024* [9]

Section I. Program Identity and Context
1. Program Identity and Curriculum
2. Faculty and Administration
3. Learning Environments and Resources
Section II. Knowledge Acquisition and Application
4. Global Context
5. Collaboration
6. Business Practices and Professionalism
7. Human-Centered Design
8. Design Process
9. Communication
10. History
11. Design Elements and Principles
12. Light and Color
13. Products and Materials
14. Environmental Systems and Human Wellbeing
15. Construction
16. Regulations and Guidelines

According to TAPLAK, although the mission, objectives, educational goals, social and sectoral expectations, and the characteristic features of the geographical region where the program is located may cause differences among interior architecture departments' undergraduate programs, there are minimum required educational areas that these programs must cover. One of these areas is the field of color and light, listed as the ninth category (Table 4). The inclusion of color as a minimum requirement for

accreditation of interior architecture departments undergraduate programs emphasizes the importance of this subject for interior architecture education and profession [10].

Table 4. *TAPLAK Minimum Educational Areas for Interior Architecture Departments* [10]

a. International Context
b. Collaboration
c. Professional Practice and Professionalism
d. Human-Centered Design
e. Design Process
f. Communication
g. History
h. Design Elements and Principles
i. Light and Color
j. Products and Materials
k. Environmental Systems and Comfort
l. Construction/Building/Manufacturing
m. Regulations and Legislation

The inclusion of color courses in the educational curriculum is not only a requirement of professional training and practice but also a reflection of client expectations. In a study titled "A Proposed Model for the Design and Development of Interior Architecture Education Programs," a survey was conducted with clients, who were asked to evaluate essential areas of knowledge for interior architects. Color knowledge was ranked among the most important by 84% of the participants [11]. This result highlights that color knowledge is one of the most expected competencies in the interior architecture profession.

In conclusion, color knowledge in undergraduate interior architecture education clearly stands out due to the discipline's art-based nature and its importance in international accreditation standards. Interior architecture education should aim not only to provide students with technical knowledge but also to cultivate aesthetic and artistic sensitivity. Thus, future interior architects will be equipped to design spaces that are both functional and aesthetically compelling. Color knowledge is an indispensable and fundamental part of this process.

3.2. Identification and Analysis of Color Courses in Undergraduate Interior Architecture Education

As of the 2024–2025 academic year, interior architecture education is offered in a total of 106 departments across Türkiye. Within the scope of this study, the faculties to which the interior architecture departments are affiliated were identified. Subsequently, course information forms, curricula, and course schedules published on the official websites of the relevant universities were searched using the keyword "color" and its variations. As a result of the review, color-focused courses could not be identified in 23 of the 106 programs examined. Therefore, only the departments with identified color-focused courses were analyzed and included in Table 5. Additionally, the analysis considered whether the relevant courses were required or elective, as well as the faculties to which these departments belonged. The obtained data are presented in the mentioned table. In the table, the course types are abbreviated as follows: R = Required, E = Elective, and ME = Major Elective.

Table 5. *Interior Architecture Departments' Color Courses*

	University Name	Affiliated Faculty	Course Title	Course Type
	Universities Offering Interior Architecture Programs and Their Color Courses			
1	Akdeniz University	Faculty of Architecture	İç Mekânda Renk ve Işık (Color and Light in Interior Space)	E
2	Çukurova University	Faculty of Architecture	Görsel Anlatım Teknikleri (Visual Representation Techniques)	E
3	Eskişehir Technical University	Faculty of Architecture and Design	İç Mekânda Renk ve Tekstil Bilgisi (Color and Textile Knowledge in Interior Space)	ME
4	İskenderun Technical University	Faculty of Architecture	İç Mekânda Işık ve Renk (Light and Color in Interior Space)	R
5	İstanbul Technical University	Faculty of Architecture	İç Mimarlıkta Renk ve Işık (Color and Light in Interior Architecture)	R
6	İstanbul Technical University (ENG)	ITU-TRNC Education and Research Campus (Famagusta)	Invstg.Colr&Light in Int.Arch	R
7	İstanbul University	Faculty of Architecture	Işık ve Renk (Light and Color)	R
8	Karadeniz Technical University	Faculty of Architecture	İç Mekân Tasarımında Renk Kullanımı (Use of Color in Interior Space Design)	E
9	Kocaeli University	Faculty of Architecture and Design	Mekânda Renk Kullanımı (Use of Color in Space)	R
10	Konya Technical University	Faculty of Architecture and Design	İç Mekânda Işık Renk ve Doku (Light, Color, and Texture in Interior Space)	E
11	Marmara University	Faculty of Fine Arts	Tekstilde Renk Uygulamaları (Color Applications in Textiles)	E
12	Mimar Sinan Fine Arts University	Faculty of Architecture	Renk ve Anlatım Teknikleri (Color and Representation Techniques)	E
13	Nevşehir Hacı Bektaş Veli University	Faculty of Fine Arts	İç Mekânda Işık ve Renk (Light and Color in Interior Space)	E
14	Ondokuz Mayıs University	Faculty of Architecture	Mekân Tasarımında Renk (Color in Spatial Design)	E
15	Yalova University	Faculty of Art and Design	Renk Bilgisi (Color Knowledge)	E
16	Çankaya University (İngilizce)	Faculty of Architecture	Renk İlkeleri (Principles of Color)	R
17	Fatih Sultan Mehmet Vakıf University	Faculty of Architecture and Design	Mekânda Renk ve Malzeme (Color and Material in Space)	E
			Mimaride Renk (Color in Architecture)	E
18	İstanbul Aydın University	Faculty of Architecture and Design	Biçim, Işık ve Renk (Form, Light, and Color)	R
19	İstanbul Beykent University (ENG)	Faculty of Engineering and Architecture	Color and Light in Space	R
20	İstanbul Beykent University	Faculty of Engineering and Architecture	Mekânda Renk ve Işık (Color and Light in Space)	R
21	İstanbul Bilgi University (ENG)	Faculty of Architecture	İç Mekânda Yüzeyler: Renk, Malzeme, Doku (Interior Surfaces: Color, Material, and Texture)	R
22	İstanbul Esenyurt University	Faculty of Engineering and Architecture	Mekânda Renk Analizi (Color Analysis in Space)	R
			Renk Kuramı (Color Theory)	E
23	İstanbul Gelişim University	Faculty of Fine Arts	Renk Bilgisi (Color Knowledge)	E
			İç Mimaride Renk ve Kullanımı (Color and Its Use in Interior Architecture)	E
24	İstanbul Nişantaşı University	Faculty of Art and Design	Mekânda Renk (Color in Space)	E
25	İstanbul Nişantaşı University (ENG)	Faculty of Art and Design	Color in Space	E
26	İstanbul Rumeli University	Faculty of Art, Design and Architecture	İç Mekânda Renk (Color in Interior Space)	E
			İç Mekân Tasarımında Renk Doku Tekstil (Color, Texture, and Textile in Interior Space Design)	E
27	Konya Food and Agriculture University	Faculty of Engineering and Architecture	Renk Bilgisi (Color Knowledge)	E
28	Kto Karatay University	Faculty of Fine Arts and Design	İç Mekânda Işık-Renk-Doku (Light, Color, and Texture in Interior Space)	E

29	Mef University (ENG)	Faculty of Art, Design and Architecture	Practicing Color Theory	E
30	Toros University	Faculty of Fine Arts, Design and Architecture	İç Mekânda Renk Kuramı ve Uygulamaları (Color Theory and Applications in Interior Space)	E
			Renk Kuramı ve Uygulama (Color Theory and Practice)	E
31	Eastern Mediterranean University	Faculty of Architecture	İç Mekânlarda Renk ve Işık (Color and Light in Interior Spaces)	R
32	Eastern Mediterranean University (ENG)	Faculty of Architecture	İç Mekânda Renk ve Aydınlatma (Color and Lighting in Interior Space)	R
33	Girne American University	Faculty of Architecture, Design and Fine Arts	Renk Teorisi ve Uygulamaları (Color Theory and Applications)	R
34	Girne American University (ENG)	Faculty of Architecture, Design and Fine Arts	Color Theory and Practice (Color Theory and Practice)	R
35	International Cyprus University	Faculty of Fine Arts, Design and Architecture	Renk Bilgisi (Color Knowledge)	E
36	International Cyprus University (ENG)	Faculty of Fine Arts, Design and Architecture	Colour Culture	E
37	Near East University	Faculty of Architecture	Renk Teorisi ve Sunumu (Color Theory and Presentation)	R
			İç Mekânda, Işık Renk ve Doku (Light, Color, and Texture in Interior Space)	E
			Mimaride Renk Kavramı (Color Concept in Architecture)	E
38	Near East University (ENG)	Faculty of Architecture	Colour Theory and Presentation	R
			Colour Concept in Architecture	E
Universities Offering Interior Architecture and Environmental Design Programs and Their Color Courses				
	University Name	**Affiliated Faculty**	**Course Title**	**Course Type**
39	Afyon Kocatepe University	Faculty of Fine Arts	Renk ve Doku (Color and Texture)	R
40	Bilecik Şeyh Edebali University	Faculty of Fine Arts and Design	İç Mekânda Renk ve Işık (Color and Light in Interior Space)	E
41	Hacettepe University	Faculty of Fine Arts	İç Mekânda Işık, Renk ve Doku (Light, Color, and Texture in Interior Space)	E
42	Kırıkkale University	Faculty of Fine Arts	Renk Psikolojisi (Color Psychology)	R
43	Necmettin Erbakan University	Faculty of Fine Arts and Architecture	İç Mekânda Işık Renk ve Doku (Light, Color, and Texture in Interior Space)	E
44	Osmaniye Korkut Ata University	Faculty of Architecture, Design and Fine Arts	Renk ve Anlatım Teknikleri I (Color and Expression Techniques I)	R
			Renk ve Anlatım Teknikleri II (Color and Expression Techniques II)	R
45	Altınbaş University	Faculty of Engineering and Architecture	Renk Teorisi ve Uygulamaları (Color Theory and Applications)	E
46	Altınbaş University (ENG)	Faculty of Engineering and Architecture	Color Theory and Applications	E
47	Ankara Medipol University	Faculty of Fine Arts, Design and Architecture	Renk ve Işık (Color and Light)	R
48	Antalya Bilim University (ENG)	Faculty of Fine Arts and Architecture	İç Mekânda Renk ve Doku (Color and Texture in Interior Space)	R
49	Atılım University	Faculty of Fine Arts, Design and Architecture	Renk Teorisi ve Uygulamaları (Color Theory and Applications)	R
			Işık ve Renk Teorisi (Light and Color Theory)	E
50	Avrasya University	Faculty of Engineering and Architecture	İç Mimaride Renk (Color in Interior Architecture)	E
51	Bahçeşehir University (ENG)	Faculty of Architecture and Design	Aydınlatma ve Renk Uygulamaları (Lighting and Color Applications)	E
52	Başkent University	Faculty of Fine Arts, Design and Architecture	İç Mekân ve Renk (Interior Space and Color)	R
53	Beykoz University	Faculty of Art and Design	Mekânda Renk Kullanımı (Use of Color in Space)	R
54	Biruni University	Faculty of Engineering and Natural Sciences	Serbest Resim ve Renklendirme Teknikleri (Freehand Drawing and Coloring Techniques)	E
55	Fenerbahçe University	Faculty of Engineering and	Renk Kuramı ve Uygulamalar (Color Theory and	R

		Architecture	Applications)	
56	Fenerbahçe University (ENG)	Faculty of Engineering and Architecture	Color Theory and Practices	R
57	Hasan Kalyoncu University	Faculty of Fine Arts and Architecture	İç Mimaride Renk Uyumu (Color Harmony in Interior Architecture)	E
58	Işık University	Faculty of Art, Design and Architecture	İçmimaride Form Doku Renk (Form, Texture, and Color in Interior Architecture)	E
59	Işık University (ENG)	Faculty of Art, Design and Architecture	Form, Texture, Colour in Interior Architecture	E
60	İhsan Doğramacı Bilkent University (ENG)	Faculty of Fine Arts, Design and Architecture	Color Theory and Applications	E
			Lighting and Color	E
61	İstanbul Atlas University	Faculty of Engineering and Natural Sciences	Renk ve Işık (Color and Light)	E
62	İstanbul Esenyurt University	Faculty of Engineering and Architecture	Renk Kuramı (Color Theory)	E
			Mekânda Renk Analizi (Color Analysis in Space)	E
63	İstanbul Galata University	Faculty of Arts and Social Sciences	İç Mekanlarda Aydınlatma ve Renk (Lighting and Color in Interior Spaces)	R
			Işık ve Renk Teorisi (Light and Color Theory)	E
64	İstanbul Galata University (ENG)	Faculty of Arts and Social Sciences	İç Mekanlarda Aydınlatma ve Renk (Lighting and Color in Interior Spaces)	R
			Işık ve Renk Teorisi (Light and Color Theory)	E
65	İstanbul Gedik University	Faculty of Architecture and Design	İç Mekânda Renk (Color in Interior Space)	E
66	İstanbul Gelişim University	Faculty of Fine Arts	İç Mimaride Renk ve Kullanımı (Color and Its Use in Interior Architecture)	E
			Renk Bilgisi (Color Knowledge)	E
67	İstanbul Kültür University	Faculty of Architecture	Form Doku Renk (Form, Texture, and Color)	E
68	İstanbul Kültür University (ENG)	Faculty of Architecture	Renk Kullanımı ve Sunum Teknikleri (Use of Color and Presentation Techniques)	E
69	İstanbul Medipol University	Faculty of Fine Arts, Design and Architecture	İç Mekânda Işık ve Renk (Light and Color in Interior Space)	R
70	İstanbul Medipol University (ENG)	Faculty of Fine Arts, Design and Architecture	İç Mekânda Işık ve Renk (Light and Color in Interior Space)	R
71	İstanbul Okan University	Faculty of Art, Design and Architecture	Aydınlatma-Renk-Işık (Lighting-Color-Light)	E
72	İstanbul Sabahattin Zaim University	Faculty of Engineering and Natural Sciences	İç Mekânda Işık, Renk ve Doku (Light, Color, and Texture in Interior Space)	E
73	İstanbul Ticaret University	Faculty of Architecture and Design	Renk Kuramı (Color Theory)	E
74	İstanbul Topkapı University	Faculty of Fine Arts, Design and Architecture	İçmimari ve Renk (Interior Architecture and Color)	R
75	İstanbul Yeni Yüzyıl University	Faculty of Engineering and Architecture	Renk ve Armoni (Color and Harmony)	R
76	Izmir University of Economics	Faculty of Fine Arts and Design	İç Mekanlarda Renkler ve Dokular (Colors and Textures in Interior Spaces)	E
77	Kadir Has University	Faculty of Art and Design	Renk, Tasarım ve İletişim (Color, Design, and Communication)	E
78	Ostim Technical University	Faculty of Architecture and Design	Aydınlatma ve Renk (Lighting and Color)	R
79	Özyeğin University	Faculty of Architecture and Design	İç Mimarlar İçin Renk (Color for Interior Architects)	E
80	Ted University	Faculty of Architecture and Design	Işık ve Renk (Light and Color)	R
			İç Mimarlıkta Renk, Kuram ve Uygulama (Color, Theory, and Practice in Interior Design)	E
81	TOBB University of Economics and Technology	Faculty of Architecture and Design	İç Mekânda Işık, Renk, Doku (Light, Color, and Texture in Interior Space)	E
82	Yaşar University	Faculty of Architecture	İç Mimarlıkta Renk ve Tekstil (Color and Textile in Interior Architecture)	R
83	Cyprus American University	Faculty of Fine Arts	Renk Teorisi ve Uygulamaları (Color Theory and Applications)	R

As of the 2024–2025 academic year, interior architecture departments education is provided in 106 departments. Among these, 49 are titled "Interior Architecture," while 57 are titled "Interior Architecture and Environmental Design." Of these departments, 27 are at public universities, 68 are at foundation (private) universities, and 13 are located in the Turkish Republic of Northern Cyprus (TRNC).

When the curricula of the "Interior Architecture" departments are examined, it is found that 38 of them include a course related to color, whereas 11 do not. According to these results, 71.51% of the curricula include a course covering the subject of color, while 24.49% do not include any course on this subject (Figure 2). Among the 46 identified courses, 17 are required, 28 are elective, and 1 is a major elective course.
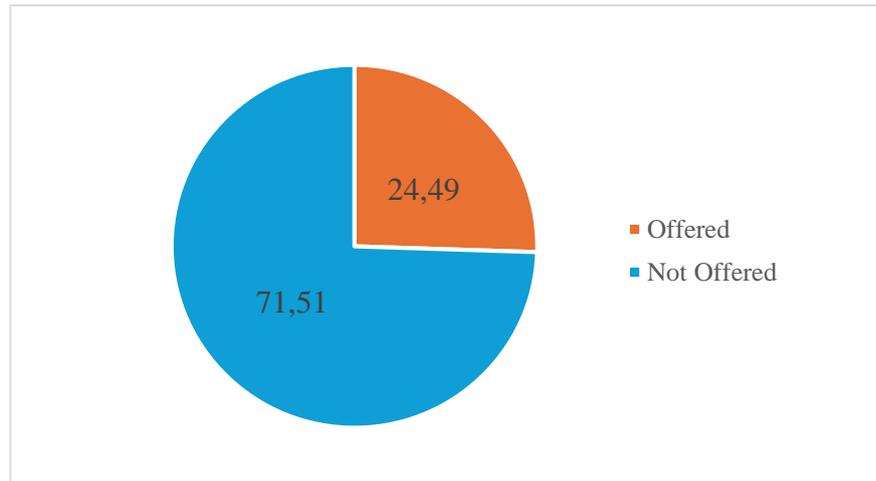

Figure 2. *Distribution of Color Courses in Interior Architecture Undergraduate Programs*

In the "Interior Architecture and Environmental Design" departments, 45 include a color course, whereas 12 do not. According to these results, 78.95% of the curricula include a course covering the subject of color, while 21.05% do not include any course on this subject (Figure 3). Among the 53 identified courses, 21 are required and 32 are elective.
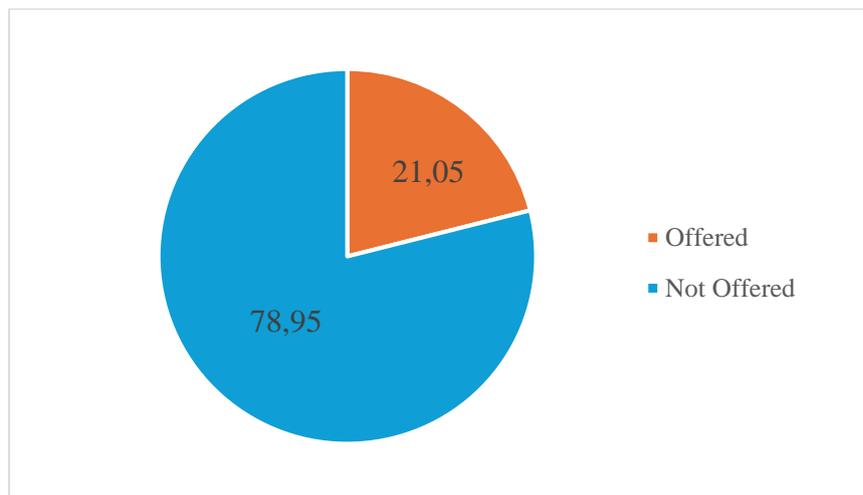

Figure 3. *Distribution of Color Courses in Interior Architecture and Environmental Design Undergraduate Programs*

In total, at least one course primarily focused on color is included in the curricula of 83 departments, while no such course could be identified in the curricula of 23 departments. These findings indicate that 77.36% of undergraduate programs offering interior architecture education include a color-related course, whereas 22.64% do not (Figure 4). When comparing the availability of color courses in "Interior

Architecture" and "Interior Architecture and Environmental Design" programs, a difference of 3.44% is observed between them.
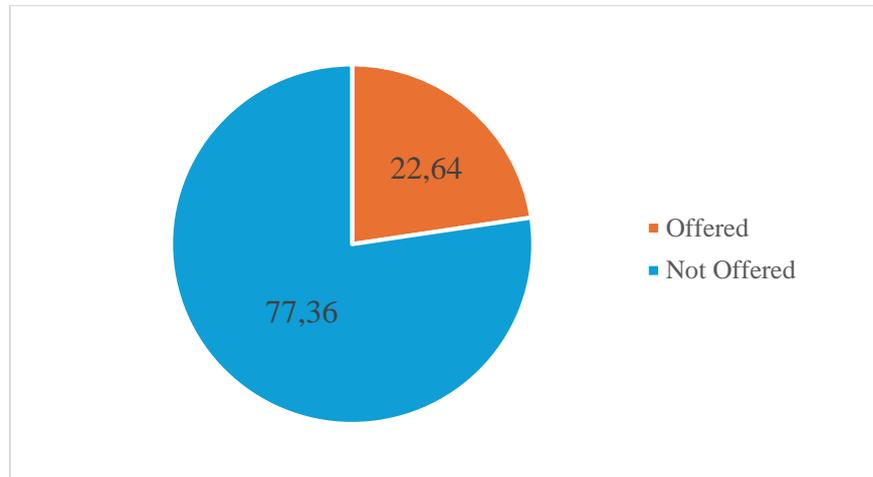

***Figure 4.** Distribution of Color Courses in Interior Architecture Departments Undergraduate Programs*

A total of 99 color-related courses were identified across the interior architecture departments. Of these courses, 38% are required, 61% are elective, and 1% is a major elective course (Figure 5).
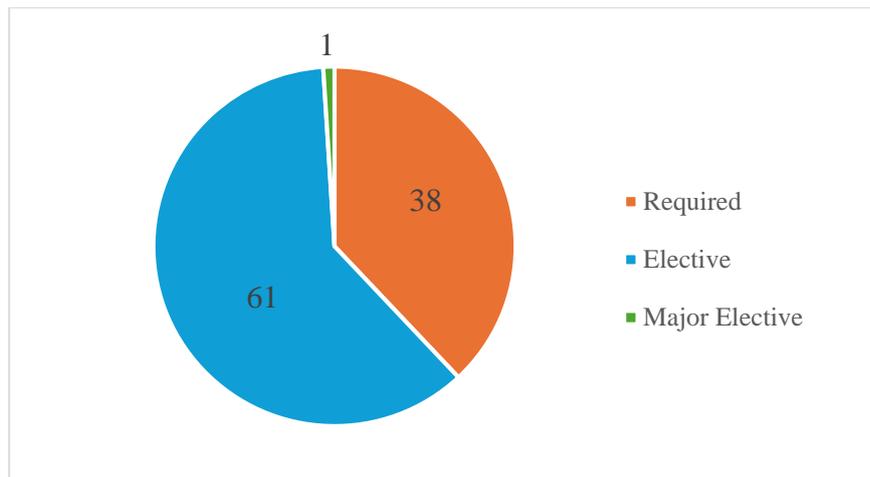

***Figure 5.** Distribution of Color Courses by Required / Elective / Major Elective Status*

When examining the distribution of required and elective courses, it is evident that the majority of color courses are offered as electives. This situation suggests that the number of programs that actually provide color education may be lower, especially when departments without any color courses are also considered. Although some programs do include a color course in their curricula, offering it as an elective allows students to graduate without taking it. As such, elective courses are those taken based on student preference and are not mandatory for graduation.

When the color courses are examined in terms of the semesters in which they are offered, data from 86 courses were obtained. It was found that 7% of these courses are offered in the first semester, with four of them categorized as required and two as elective (Table 6). 8% of the color courses are offered in the second semester, and all six courses in this group are required. Accordingly, considering the total number of courses offered in the first and second semesters, 15.12% of color courses are presented during the first year of education. The fact that 10 of these are required highlights the significance of introducing color knowledge at an early stage of design education.

Table 6. *Semesters in Which Color Courses Are Offered*

Academic Year	Semester	Courses (%) – Semester	Courses (%) – Year
1st Year	1st Semester	7	15,12
	2nd Semester	8	
2nd Year	3rd Semester	19	38,37
	4th Semester	20	
3rd Year	5th Semester	24	38,37
	6th Semester	14	
4th Year	7th Semester	6	8,14
	8th Semester	2	

19% of the courses are offered in the third semester, 20% in the fourth semester, 24% in the fifth semester, 14% in the sixth semester, 6% in the seventh semester, and 2% in the eighth semester. The courses are predominantly offered at the second- and third-year levels.

3.3. Analysis of the Content and Teaching Methods of Color Courses in Undergraduate Interior Architecture Education

In order to define the objectives and learning outcomes of color courses in interior architecture departments, the educational criteria set by accreditation programs were first examined. Subsequently, the objectives and learning outcomes of color courses offered in relevant departments of universities were analyzed.

According to the accreditation standards of the Design and Planning Accreditation Association (TAPLAK) for undergraduate programs in interior architecture departments, it is required that the subjects of light and color be included at a minimum level in the curriculum. This criterion is stated as follows:

"Interior architects apply the principles and theories of light and color, taking into account their impact on the environment, human health, and safety."
TAPLAK explains that, through this criterion, the goal is to ensure that graduates of interior architecture programs understand the art and science of light and color. It emphasizes the necessity for graduates to integrate their knowledge and skills regarding light and color into design processes in order to enhance the quality of human life and experience [10].

The Council for Interior Design Accreditation (CIDA) also addresses light and color as the 12th criterion in its professional standards document. Through this criterion, it aims for graduates to understand the art and science of light and color and to integrate them into the design process [9]. Within this scope, student expectations and outcomes are listed (Table 7). When compared to CIDA criteria, TAPLAK accreditation standards are explained in less detail.

Table 7. *CIDA Lighting and Color Standards* [9]

Student Learning Expectations
a) Students are aware of the impact of illumination strategies and decisions.
Students understand:
b) the principles of natural and artificial lighting design.
c) strategies for using and modulating natural light.
d) Students appropriately select and apply luminaires and light sources.
e) Students understand how light and color impact health, safety, and wellbeing in the interior
Student work demonstrates understanding of:
f) color principles, theories, systems, and terminology.
g) color in relation to materials, textures, light, and form.
Student work demonstrates the ability to appropriately:
h) select and apply color to support design purposes
i) use color solutions across different modes of design communication

Color-focused courses in undergraduate interior architecture programs not only aim to provide students with theoretical knowledge of color, but also teach them how to integrate this knowledge into the design process. When course contents are examined, the nature of the knowledge and skills intended to be conveyed to students becomes clear through the defined objectives, learning outcomes, and the methods and techniques used. The scope of color education is shaped by both professional requirements and theoretical and practical components.

As seen in Table 5, when the course titles from the curricula of interior architecture departments are reviewed, it becomes apparent that concepts such as color, light, material, theory, application, and analysis are addressed together. This multidimensional approach indicates that color knowledge is conveyed not only on a theoretical level but also through practical applications.
The listed courses reveal that the topic of color in interior architecture education is addressed through various contents:

- Courses such as "Color Theory and Practice", "Renk Bilgisi" (Color Knowledge), and "Renk Kuramı" (Color Theory) emphasize fundamental color knowledge and theoretical approaches.
- Courses like "İç Mekânda Işık ve Renk" (Light and Color in Interior Spaces), "Mekânda Renk Kullanımı" (Use of Color in Space), "İç Mekânda Yüzeyler: Renk, Malzeme, Doku" (Surfaces in Interiors: Color, Material, Texture), and "Renk ve Anlatım Teknikleri" (Color and Visual Representation Techniques) highlight the relationship between color, light, and material, addressing their contributions to spatial perception.
- Additionally, certain courses include more specialized topics such as color psychology, color culture, color harmony, and coloring techniques.

This demonstrates that the subject of color holds significant importance in education through both its theoretical and practical dimensions. However, it also reveals a lack of standardization in course naming. Considering that these courses are required in some programs and elective in others, it can be said that color education varies from one program to another.

Within the relevant fields, course descriptions, curricula, and syllabi shared on university websites were reviewed, and the objectives and learning outcomes of 59 out of 99 identified color-related courses were accessed. These objectives and outcomes were analyzed using keywords to determine the shared goals of the color courses. The keywords were diversified based on accreditation programs and the topics of light and color, including terms such as: color, light, material, texture, form, color principles, color theories, color systems, color terminology, environment, health, safety, well-being, lighting, natural lighting, and artificial lighting, along with their derivatives. The common components of the accessed objectives and learning outcomes were listed through a keyword analysis (Table 8).

The keyword analysis revealed four main themes: color knowledge and theory, material-texture-form relationship, color and perception, and lighting. Each theme includes sub-keywords that indicate the specific focus areas of the courses.

Color Knowledge and Theory includes 53 occurrences of keywords such as color theories (17), color principles (15), color systems (11), and color harmony (7), highlighting a strong emphasis on theoretical foundations. The inclusion of tools like the color wheel and terminology also reflects a practical aspect of color knowledge.

Material, Texture, and Form is the most frequently referenced theme, with 64 occurrences. Sub-keywords such as material (14), form (21), and texture (19) emphasize tangible design elements. References to areas like textiles and surface materials indicate a hands-on, application-oriented approach in these courses.

***Table 8**. Keyword Analysis of Course Objectives and Learning Outcomes*

Keywords	Sub-keywords	Frequency	Total
Color Knowledge and Theory	Color Theories	17	53
	Principles of Color	15	
	Color Terminology	2	
	Color Systems	11	
	Color Wheel	1	
	Color Harmony	7	
Material, Texture, and Form	Material	14	64
	Form and Texture	2+21+19	
	Textile	7	
	Surface Materials	1	
Color and Perception	Environment	8	53
	Health	2	
	Safety	1	
	Well-being	1	
	Psychological	16	
	Socio-cultural Effects	1	
	Perception	24	
Lighting	Lighting	11	16
	Natural and Artificial Lighting	5	
Light	Light	24	24

In the Color and Perception theme, 53 references were identified. Keywords like perception (24) and psychological (16) suggest a focus on cognitive and emotional aspects. Contextual terms like environment, health, well-being, and socio-cultural effects show that color is also addressed in broader environmental and societal contexts.

Lighting had the fewest direct keyword matches. Course content with this keyword tends to focus more on lighting education than on color itself. These courses aim to teach lighting strategies, natural/artificial lighting principles, and the correct use of light fixtures. For example, in courses like "Form, Light and Color" or "Color and Light", color is discussed but not as a core focus.

Overall, the keyword analysis shows that course content largely revolves around fundamental design elements such as color theory, perception, material, and form. These themes point to a holistic learning approach that connects theory with practice. In contrast, lighting is treated more technically and functionally, suggesting that it occupies a more specialized and independent role in the curriculum. While the program outcomes show a general consistency, some thematic differences in content are evident.

5. DISCUSSION AND CONCLUSION

This study aimed to investigate the presence, scope, and diversity of color education in undergraduate interior architecture and interior architecture and environmental design programs in Turkey. The findings show that while most programs include color-focused courses, there are significant variations in course format, content, and semester placement. Among 106 programs, 83 offered at least one color course, while 23 programs did not, indicating considerable differences in curriculum content across institutions. In programs with color education, courses were offered as required, elective, or major elective, with the majority being elective.

Color courses are predominantly placed in the second and third years, with only 15% offered in the first year, despite the critical role of early color education in developing foundational design skills. Course

titles and contents reveal that color knowledge is delivered both theoretically and practically; however, naming conventions and instructional approaches vary widely across programs. Some courses focus on "Color Theory," "Color and Material," or "Color in Space," whereas others integrate broader topics such as light, material, psychology, and culture.

Accreditation standards emphasize the inclusion of color and light in interior architecture education. Therefore, a common educational framework should ensure that all students acquire core competencies in color principles, theories, systems, and terminology; color application in relation to material, texture, form, and light; color selection to support design objectives; development of color solutions in communication tools; and understanding and interpreting the color-space relationship.

Based on the findings, the following recommendations are proposed for a common educational framework:

- Core competencies in color principles, theories, systems, and terminology can be ensured for all students. This would guarantee equal access to foundational knowledge, so that graduates of the same profession share a minimum level of competence.
- Color applications may be integrated in relation to material, texture, form, and light. Such integration can reflect the real design process and allow students to understand color in direct relation to other design elements.
- Each program could include at least one required color course, complemented by elective options for advanced study. Since students may choose not to take electives, a required course can ensure that everyone receives basic color education, while electives may provide opportunities for deeper exploration.
- Learning outcomes such as color knowledge, perception, harmony, and integration with spatial design and materials may be covered. These outcomes can reflect the multifaceted role of color in design and prepare students for professional practice.
- Theoretical and practical components can be balanced, while multidisciplinary perspectives (e.g., psychology, culture, lighting design) may be encouraged. A combination of approaches could help students develop both conceptual understanding and applied skills, while also broadening their perspective beyond a purely aesthetic focus.
- A structured progression of color education could be provided across semesters. Such a step-by-step framework may ensure continuity in learning, prevent fragmentation, and allow students to build complexity over time.

By implementing these measures, color education, a critical component of interior architecture, can be delivered consistently and comprehensively across all undergraduate programs, ensuring both breadth and depth of knowledge for every student.

Limitations

This study is based on information publicly available on university websites, which may not fully capture the most current course details. Direct interviews with instructors were not conducted, so actual course delivery could vary in practice. Additionally, the study focuses on Turkey, and international comparisons were not included. These considerations should be taken into account when interpreting the findings.

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