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Determination of the structure of the project based studio courses for the education of interior design bachelor

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Abstract

In order to develop interior design bachelor education on national scale, it is necessary to structure teaching methods and course contents within the framework of international professional qualifications. For this purpose, in this study, the most intensive courses which has the highest course hours in the interior design curriculum were discussed. In this paper, it is aimed to examine the structures of design studios in interior design departments accredited by organizations that determine professional qualifications and to create comprehensive data on their contents. The relevant course data for two interior design departments accredited by the CIDA organization in the USA and four interior design departments accredited by national accreditation organizations in Europe were obtained for study. The course contents were classified by coding in content analysis approach. The data obtained will be compiled under four headings: "content", "subject", "skill" and "output" for each studio level. As a result, comprehensive and categorized tables was created for each studio level, containing current design issues and studio methods, which can be used as a suggestion for structuring interior design studio classes.

Keywords

Interior design, Interior design education, Interior design studio, Studio learning, Design learning.

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1. Introduction

In order to train professionals who can have the requirements of the twenty-first century and use the necessary knowledge and skills effectively in accordance with international standards, it is necessary to develop the programs nationally in interior design education. For this purpose, it was foreseen that the contents of the design studio, which constitute the most intensive course group in interior design programs, should be developed. The interior design department in Turkey, the interior design studios in terms of the content of project given is known to be addressed in the course of so many different issues and design problems. Developing the project course contents in accordance with the current situation in the world is a constant requirement. It is observed that the design problems discussed around the world change on average every 5-10 years. Consequently, the lack of knowledge sources containing comprehensive and up-to-date project course content recommendations was noticed. The main purpose of the study, thanks to the course contents belong to the sample schools accredited by the organizations of professional qualification, it was aimed to develop interior design education in Turkey and to improve it by contributing to the current structure. In this respect, it is significant to integrate the current design problems that the project courses should include and the current solution approaches to be produced for these problems into interior design curricula. For this purpose, it is aimed to collect the project-based studio course contents of the sample schools under certain themes. The criterion is that the sample schools are accredited by CIDA or the national accreditation bodies in Europe. In this respect, the schools whose data are available are from the USA and Europe. For this, the studio course content texts are brought together and the texts are divided into sub-categories that make up the whole structure according to their content. In this way, a guide will be created that includes current topics, contents, and methods that can be used in the planning of interior design studio courses at regional and international levels.

For this purpose, the research questions of the study mainly focused on the contents of the design studio courses. It is aimed to answer these questions within the framework of interior design professional standards. In interior design education;

- What are the current design issues in the world that can create content for the interior design studio?
- What topics are currently being discussed in interior design studios in the world?
- What skills are gained in interior design studios in today's world?
- What kind of outputs are expected in interior design studios today?

Within the scope of this study, the answers to these research questions were tried to be formed, the current design problems that were discussed in the studio courses in recent years were revealed, and the themes related to the current issues were reached. Knowledge was gathered about what skills were gained through studio classes and what kind of outputs were achieved at the end of the learning process in these studios.

In Turkey, due to the lack of a body that has the authority to accredit interior design departments today as it does in the United States, creating a resource that is referenced as a directory for interior design education was found crucial. Thus, the findings of the study could contribute to the field with the accreditation process, which was so important in terms of higher education qualifications. Within the scope of the study, the table including the most up-to-date international regulations in the field of interior design; was created according to the professional qualifications contained in the European Council of Interior Architects (ECIA) 2013 report and the professional standards determined in 2020 by the Council for Interior Design Accreditation (CIDA). A framework will be provided and the data obtained from the schools will be interpreted in the light of this knowledge. The content will be created as a result of project proposals, to be a resource for the interior design program in Turkey aimed at helping the development of interior design and updating training programs.

2. Design studio and learning processes

In interior design education, studio education applies the learning method known as "project-based learning" in the literature in terms of practical outcomes. Project-based learning includes user-focused tools. With an emphasis on learning rather than teaching, project-oriented programs are recommended for students to learn self-management, manage their time and resources, and therefore better prepare for professional practice (Altay, 2014). "Project-based learning can be defined in various ways with different educational disciplines and levels. Projects are frequently used in K-12 level education, so it is a concept and teaching method that most students are familiar with" (Mills & Treagust, 2003, 8). Interior design studios are a project-based, student-centered and practice-oriented learning environment where it is aimed to provide the student with the necessary competencies for a graduate interior designer. "Without a doubt project studio is the essence of the professional Education" (Cordan et al., 2014, 191). Ledewitz (1985) states that the lack of clarity over the purpose and effectiveness of the design studio reflects its complexity as a teaching or learning. Though the design studio is the main tool in teaching the main elements in design education (Ledewitz, 1985). The first of these is that students acquire presentation and visualization skills. Another is that students learn the professional language. Exploring and explaining ideas through drawing is a new experience for students. Through the experiences in the studio, the design student gains the power of thinking and expression in design, and at the same time, he can master the common expression language that appeals to all disciplines under the roof of design.

Studio performance in school depends on various factors, but they can be grouped in the following three categories: student characteristics, teacher impact and school properties (Gajda, 2016). Cho (2017) states that there is no relationship between design studio performance and creativity, spatial ability, and visual cognitive style. Also, the evaluation of students' performance in design studios is different from lectures in which objective tests and exams are conducted. Different from lecture courses, where objective exams and tests are used to measure student performance, but in design studio, it is measured by assessment of students' design process and outcomes according to the learning objectives of the course (Cho, 2017). The learning of design is reinforced by the design process experienced in the studio environment and internalized by the student. Active components to realize an effective studio communication: "design studio as a communication medium", "design task or problem", "design knowledge" and "different communication environment" and people "student designers and studio instructors" (Paker-Kahvecioğlu, 2007). Schön defines that in design processes, the concept of "reflective practice" emerges when there is an indirect response to situations of uncertainty, imprecision or uniqueness within the actions of "knowing-in-action", "reflection-in-action" (Schön, 1987) and "reflection-on-action" (Webster, 2008; Schön, 1987). "Throughout the design process, the given design problem turns into a design solution, and a continuous dialogue between the student and the lecturer strengthens the design process (Demirkan, 2016, 32)". Kvan (2001) explains that design teaching usually begins by posing a design problem that includes project features, program attributes (duration, outputs) and objects (Kvan, 2001). Design education includes lectures and studio teaching to engage students with design knowledge, skills and applications (Sagun et al, 2001).

According to Demirbaş and Demirkan (2003), most of the recent work on the design studio is based on computer-aided design or distance learning. "Some other work involves the design studio as an environment or the process in the studio" (Demirbaş & Demirkan, 2003, 437-438). There are some studies that examine many questions related to shaping the future of design and engineering (Smith, 2008). As emphasized in the literature, project courses which are the equivalent of project-based, practical learning methods in interior design education, are of primary im-

portance in educational programs. In addition, although there are many studies about project-based education and studio teaching in design education in the literature, there is no scientific study that directly touches on the importance of up-to-dateness in interior design studio content, discusses the course contents of the projects or offers up-to-date content suggestions. In these respects, this study is expected to fill the gap in the literature.

3. Professional competencies for interior design

The central theme of interior design is the human interaction with space[1,2]. Contemporary critical spatial practice is created on three layers: physical space also defined "perceived environment", mental space which is imagined, designed and planned and social space that includes human activities and communication.

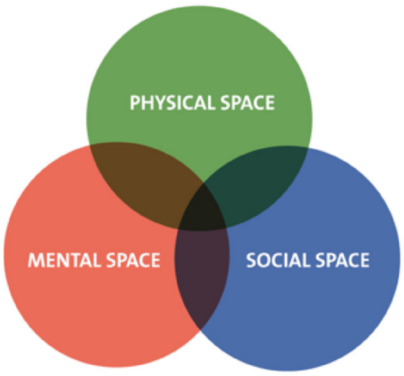

Figure 1. *The relationship of three areas of space* [1].

Interior design is also defined by the concept of space design-space within the built environment, ephemeral space that appears and disappears, and meta-space that only exists in digital form[1]. Kaçar (1997) states that interior design consists of practical, aesthetic and functional requirements (Kaçar, 1997). Today, the profession of interior design is complex and is not limited to choosing colors and tiles, it expands to include communication, business, and management (Hernecheck et al, 1983). There are different professional definitions of interior design in the literature, but it can be said that it is a profession and a design discipline that directly affects human life in general and shapes human life.

As in every field of education, there is a need for updating learning strategies and structuring training programs in design studio learning. Educators are constantly reviewing the curriculum and course structures to keep abreast of changes in their field. The updating process helps educators to better meet the needs of the individual and the profession (Myers, 1982). When the education programs are examined, differences are observed even in the education programs of a particular field in the country. Professional organizations and some accreditation organizations are working to standardize the education process, to search for education quality and compliance with various criteria. Through these organizations, there is an international discussion and partnership of professional practice analysis and training programs accreditation.

To renew and improve the curriculums, course contents and program the concept of competency should be questioned. It can be deduced that Bloom interprets the concept of competence as a set of knowledge, intellectual abilities and skills necessary to cope with problems (Bloom, 1956). In interior design studio, it is aimed to provide the student with the necessary competencies for a graduate interior designer. Foundation of Interior Design Accreditation (FIDER), which is an important institution that determines professional competencies in the field of interior design in the world, was established in 1970 in the USA to determine interior design professional standards, and after 2006 it was named CIDA. In Europe, ECIA, the common platform of European Union member countries in the field of interior design, was established in 1992. The criteria set by CIDA cover professional responsibilities in the widest way and provide qualifications for evaluation of training programs. Likewise, the Higher Education Qualifications Framework (TYYÇ) in Turkey cannot provide training program evaluation and defines the knowledge, skills and competencies that professionals should have (Özsavaş & Güler, 2012).

The table that shows interior design professional standards (Table 1) is a

Table 1. *Interior design professional standards according to CIDA 2020 and ECIA 2013, 2020.*

Cultural Values and Responsibilities	Technical Skills	Creative and Social Skills	The Quality of the Education
Global perspective	Professional practice and project management	Design process management	Compliance of the content of the training with the professional qualifications
Human-focused	Visual presentation and expression skills	Creative problem solving / Creative thinking	Accreditation
Professional ethic	Knowledge of material and detail	Collaboration skills (interdisciplinary, intradisciplinary)	Supports (Physical equipment, financial resources and locations)
Historical and cultural responsibility	Knowledge of environmental systems	Verbal and auditory communucation skills	Quality of academic human resource
General design theory, technology and the knowledge of humanities	Knowledge of structure and fine structure	Space and form competencies	Identity and context
Innovation culture	Knowledge of regulations and codes	Aesthetic use of color	
	Knowledge of color (technical)	Critical and analytical thinking	
	Manual or digital drawing, drafting	To follow innovations	
	Design research and documenting	Ability to manage art and design principles in a broad social and cultural perspective	
		Empathy	

result of content analysis. In the first stage of analysis, the sections related to professional standards or qualifications in the reports were read carefully and the common concepts in the reports were tried to be reached. To compose the table, the thematic coding had been made by authors over these documents to analyze the contents. Briefly, it was formed by the translation of the CIDA Professional Standards[3] and the "qualifications" part in the ECIA 2013 and 2020 report[1,2].

The professional standards (Table 1) were created to evaluate the accredited interior design schools in the study findings during the interpretation of the course contents. It is known that, in line with the Bologna process in Turkey, the main fields are determined within the scope of TYYÇ created by the Turkish Higher Education Council (YOK). However, it is seen that the standards of the interior design profession are not adequately represented in this structure. In addition, the creation of this table (Table 1) can contribute to the development of TYYÇ at the national level.

4. The study

Within the scope of this research, it is tried to reveal the analysis of the project-based studio course contents of the schools considered as examples and aims to reveal the structure of the studio courses and the current design problems examined based on the analysis. The structure of the study was illustrated with a diagram that sums up the process is below (Figure 2).

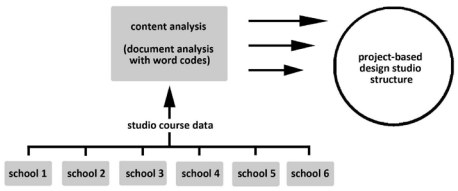

Figure 2. *The scheme of model of the study.*

The subject of the study is the project-based design studios, which are the most intense class groups in terms of course duration and content in the curriculum of interior design bachelor departments. In three or four years of bachelor study interior design or interior architecture departments in Turkey

and the other countries, in the last two or three years (2nd, 3rd and 4th grades) the studio courses are available. Interior design studios generally have the characteristic of being the highest course hours and credits of each semester in the departments of interior design. Although there are courses in a studio environment similar to the design studio in the first year, however interior design project courses are generally starting from the second year. Design studios, in schools in Turkey and abroad are generally named, "interior design project" or "interior design studio". Within the scope of this study, the contents of the design studio course, which constitute the important building blocks of the interior design education program, have been gathered together as the study subject. In this research, the fact that the schools determined for this study are accredited by official institutions has been the selection criteria for reasons such as reliability and transparency. For this reason, schools accredited by CIDA in the USA, which is the authority on professional qualifications, and ECIA in Europe, or by national accredited institutions shaped according to the values of this structure, were selected. In the next stage, schools whose catalog data can be accessed on the web were searched separately, and a study was carried out on a sufficient amount of samples that could be accessed for research.

4.1. Method

This research aims to reveal new scientific knowledge about the structure of the studio courses by the content analysis method. From this perspective, the research design of this article is based on "epistemological assumptions" aimed at creating knowledge from an ontological point of view, it has a Post-positivist perspective depending on being qualitative research and is based on an interpretive paradigm. Within the scope of the question of how can be made new knowledge, it is aimed at creating scientifically based knowledge in the field of design education. Due to the internal dynamics of qualitative research, the study is based on the principle of induction in generating knowledge.

In the study in which the content analysis method was used, "category analysis" was carried out with the coding technique in qualitative research. The course contents in the text form were tabulated and analyzed with the method of content analysis based on the principle of converting words and sentences into meaningful codes. The content analysis method is used in the meaning of "scientific semantic analysis of qualitative data brought into text form". Content analysis; is a research technique used to draw systematic and unbiased conclusions from certain characters defined in the text (Stone et al., 1966). This technique is based on the production of valid comments from the text through a series of processes. These comments are about the sender of the message, the message itself, and the recipient of the message (Weber: 1989). In the study, sub-themes under the main themes created in accordance with the content analysis method by coding in qualitative research were reached by using the course content texts. NVivo 12 software program was used to analyze the data. By evaluating the data based on the codings obtained in the content analysis, sub-themes of each studio level were reached under four main themes determined by the researcher. In accordance with the qualitative research principles and nature, the coding phase was carried out by focusing on the essence of the research and considering the integrity of meaning. With this perspective, a sub-theme repeated once in the text was included in the study findings.

4.2. Data collection and procedures

All data in document form were collected through the official websites of selected schools. In Table 2 below, detailed information of the selected institutions and departments is available.

The schools were selected among the websites including all contents of courses. To be able to reach the detailed contents from the websites is a significant limitation of this study. After the data collection, all documents that were reached were translated into Turkish in the scope of the study.

The research universe is composed of interior design departments that are

Table 2. *Information about the sample group departments.*

Place	Institution	Department	Degree	Duration
EU	IED Florance Istituto Europeo di Design	Interior Design	Bachelor of Arts	3
EU	IED Rome Istituto Europeo di Design	Interior Design	Bachelor of Arts	3
EU	Berlin International University of Applied Sciences	Interior Design	Bachelor of Arts	3
EU	Hochschule für Technik Stuttgard	Interior Architecture	Bachelor of Arts	3
USA	New York School of Interior Design	Interior Design	Bachelor of Fine Arts	4
USA	Savannah Collage of Art and Design	Interior Design	Bachelor of Fine Arts	4

accredited by authorized institutions and organizations in the USA and Europe. In the study, in which a qualitative research perspective was adopted, the sample group was limited to six interior design departments in total, which were predicted to have the criteria that could represent the universe. To determine the most up-to-date course content in the field of interior design on an international scale, two different departments accredited by the CIDA organization in the USA and four separate departments accredited by different national accreditation organizations in Europe were determined for data collection. School selection criteria; the fact that they have been accredited by the national accreditation bodies including CIDA in the USA and ECIA in Europe, and the design studio course contents can be accessed completely. It has been observed that among the interior design departments, the detailed contents of course on the websites are quite limited. According to the preliminary study conducted within the bachelor education period of three or four years of interior design departments, it is known that there are a total of four or six-level design studio courses in a department program. For this reason, different numbers of interior design studio lessons were reached from each school. For example, while there are four or five design studio courses in three-year schools in Europe, it has been observed that there are six level design studio courses in a four-year program in the USA. The amount and density of data in the documents obtained were deemed appropriate and sufficient for the use of the content analysis method in qualitative research by researchers.

4.3. Data analysis

For the analysis of data, the inductive analyses approach was used for this research in the context of qualitative research perspective. The inductive analysis involves the discovery of themes, patterns and categories within the data. From this perspective, in the first stage of analysis, the data were read several times by the researchers to find the meaningful group of words that can be a code, and then the content analysis was applied via open coding in NVivo12 software. After the open coding phase, the patterns were found and then was reached the themes and sub-themes. In the process of determining the themes, it was checked whether the expressions under each theme were coherent with the sub-theme.

To increase the reliability of the study and to prevent data loss, the links of websites or the document files were recorded according to the date of access. To copy, arrange and save the contents excel tables were used. After this phase,

Table 3. *"Content" recommendations for design studio levels.*

	Studio Level 1	Studio Level 2	Studio Level 3	Studio Level 4	Studio Level 5	Graduation Thesis / Final Studio
Content	-brief oriented design solution -building theory, planning and project work -environmental relations and perception -exploring people and space -practicing the basic design methods and conceptual processes	-creative and design basics -design and research with conceptualization -design thinking methods -design for all -intensive workshop -spatial organization, construction of typologies and forms of spaces	-documentation and communication -furniture -innovation processes and technology	-basic museology and exhibition design -collaborative practice -simulation of the professional experience	-design thinking for innovation -interdisciplinary course (with product design)	-bachelor thesis -professional simulation -self determined project type -synthesis of the whole training

they were transferred to NVivo 12 software program for analysis. Different code and theme alternatives in the process were discussed, and the agreed points were taken as a basis in determining the themes.

5. Findings

As a result of the qualitative coding stage on the data of the accessible design studio course content belonging to six different interior design departments, the "four meta-themes" formed by the content data showing similarities in the departments were determined. These are: "content", "skill", "topic" and "output" themes. The findings of the study were reached by entering the relevant codes under each main theme. The findings resulting from coding constitute course content recommendations for design studios that can be used at the national level.

5.1. Findings of "content" for design studio levels

The "content" meta-theme primarily includes information such as which approach the design studio is designed with, the method used in the studio, and what kind of skills have been acquired. Current design approaches and concepts are positioned under this title. Statements regarding the content accessed from the course content documents were coded separately for each studio level. After these codings, it was seen that the processes related to human and space relation, environment relations-perception and concept determination came to the fore for the 1st level studio course. For the 2nd level studio, concept development, research and design thinking methods can be summarized as design / inclusive design for everyone and basic design approaches. For studio level 3, both the documentation research, furniture, technology and innovation processes are emphasized. In the 4th level studio, professional experience simulation is encountered for the first time in terms of museology and exhibition, collaborations and content. Design thinking, innovation and interdisciplinary work have gained importance in the 5th level studio. Table 3 below shows the sub-themes revealed under the "content" meta-theme.

Finally, the last of the studio is often referred to as the graduation project in the departments of Turkey, as often seems to be a thesis content in the sample departments of this study. It is a project study that includes the synthesis of the whole training together with professional simulation. In addition, it is frequently encountered as a course method to determine the project type of the student himself.

5.2. Findings of "skill" for design studio levels

The codes that stand out under the title of "skill" refer to the competencies to be acquired by the student in the project course. In addition, it is a meta-theme that is most directly related to the concept of professional competence or standards, which forms the conceptual framework of the study.

Table 4. *"Skill" recommendations for design studio levels.*

	Studio Level 1	Studio Level 2	Studio Level 3	Studio Level 4	Studio Level 5	Graduation Thesis / Final Studio
Skill	-assessing client needs, developing a written concept and program -preparing high-quality presentation -principles of proper furniture arrangement -space ergonomics knowledge -to develop and present a program for an interior space with a complex function -to select fabrics, finishes, and accessories -to understand the relationship between human and space -using and analysing lighting and color	-accessible and universal design knowledge -analysing of human behaviours and needs -to develop and present a program for an complex interior space with different typologies -to develop material, color and lighting concepts -to understand the trends of the market -usign design process, programming, planing and presentation tecniques -using documentation for design process	-constructability and integration of electrical, mechanical and code requirements -handling three-dimensional space -identifying the human needs and behaviours -to carry out a survey for research -to develop and present a color, material and lighting concept -to develop socially conscious and sustainable solutions -to express themselves both graphically and verbally -to make detail solutions -user-centred interaction processes -using design thinking advanced tools	-application of human-centric design methodology in interior environments -detail solutions to integrate the technologies are developed -development and representation of a color, material and lighting concept -making scenographic project	-design skills to use in complex projects -knowledge in acoustical comfort -knowledge in code and building analysis, user assesment, programming, conceptualization and presentation -knowledge in innovation and sustainability -knowledge of furniture in technical production, aesthetics, ergonomic needs, material and surfaces -using design research methods -using of furniture in different cultural contexts	-practical realisation of the project and developed detail solutions -prepare existing condition drawings -research and documantation -self-selecting a project type and site and independent design process management

This meta-theme, which can also be expressed with words such as competence and outcome, was chosen as "skill" in the content texts. Table 4 below shows the sub-themes revealed under the meta-theme of "skill".

The skill meta-theme can be summarized as follows for the level 1 studio: requirement program and concept creation, presentation quality, qualified furniture layout, knowledge about ergonomic, textile, accessory and detail selection, understanding human-space relationship, use of lighting and color. In the 2nd level studio course; Accessible and universal design knowledge, analyzing human behavior and needs, preparing and presenting programs for complex interiors, developing material, color and lighting concepts, reading marketing trends and documenting for the design process has come to the fore. For the 3rd level studio; building, electrical and mechanical technical knowledge and requirements, using three-dimensional space with appropriate materials and technology, defining human needs and behaviors, using questionnaire techniques for research, using and presenting colors, materials and lighting, producing sustainable solutions, graphically and verbally. The subjects of being able to express, making detailed solutions, using user-focused interaction processes and using advanced design thinking tools were acquired. For the 4th level studio; the emphasis is on applying human-centered design methodology in interiors, developing detailed solutions integrated with technology, presenting color, material and lighting concepts and making scenario-based projects. In the 5th level studio; ability to use design skills in complex projects, knowledge of acoustic comfort, code and building analysis, concept development and presentation, sustainability and perspective of innovation, technical production in furniture, aesthetics, ergonomic requirements, knowledge of material and surface, use of design research methods and furniture in different cultural contexts are included.

Table 5. *"Theme" recommendations for design studio levels.*

	Studio Level 1	Studio Level 2	Studio Level 3	Studio Level 4	Studio Level 5	Graduation Thesis / Final Studio (Studio Level 6)
Theme	-residential -small-scale spaces	-catering spaces -commercial -medical practices, sport facilities -object -office spaces -residence, studio apartment or loft -wellness environments	-complex and diverse residential -professional similation for home -public interiors -system of service	-complex interior in listed buildings -hospitality and service design -museology, exhibition design -private and commercial spaces	-	-complex interiors -furniture based -scenography based -selected project type and site by students

5.3. Findings of "theme" for design studio levels

The title of "theme" is frequently asked by academicians working in the field of interior design and includes information about which project types are selected and preferred for each studio level. Table 5 below shows the sub-themes revealed under the meta-theme of "skill".

For example, a student's study of project subjects with different scales, different functions and different requirement programs throughout his undergraduate education constitutes an important richness in terms of design education. In addition, until a student's graduation, it is thought that the diversity of the project subjects in more than one level studio increases the quality of many academics. In the interior design departments examined under this title, only residences and small-scale spaces were the prominent sub-themes for the 1st level studio. For the 2nd level studio, much more various topics have been reached. These are; commercial spaces, medical applications, sports facilities, products, office spaces, residences, studio apartments, loft and wellness spaces. For the 3rd level studio; complex and various functions of housing spaces, professional simulation application for the home, public interior and service system designs have come to the fore. In 4th level studios; It was observed that complex functional interiors, tourism and service design, museum and exhibition, private and commercial spaces were discussed in the given building group. For the 5th level studio, the "subject" theme was left blank as most of the selected departments had six semesters of education. In the department programs consisting of eight semesters, no subject proposal was found for this level. For the 6th level graduation project; complex interiors, furniture-based projects, scenario-based projects, and the project type and area selected by the student were determined.

5.4. Findings of "output" for design studio levels

Under the title of "output" as the last theme determined, it was aimed to reach the details of the outputs such as what the final product to be presented as a result of the studios, in what format and according to which criteria these results are requested, and the scale selection of the models and drawings. For example, some of the interior design departments in Turkey use only 1/50 and 1/100, but it is observed that generally 1/1, 1/2 and 1/5, scales are preferred as the detail scale in drawings or models.

For the 1st level studio under the "output" theme; it was found that the model, 2D and 3D drawings were scaled 1/100, 1/50 and 1/20. In the 2nd level studio; it was learned that model, two and three-dimensional drawing, manufacturability and usability criteria and 1/100, 1/50 and 1/20 scales were used. In the interior design departments, which are the sample group, direct statements regarding the output for the 3rd, 4th and 5th studio levels were not encountered. Only in the 5th studio, there was the expression " final presentation of furniture". Regarding the output of the 6th level graduation projects, it was often seen that the project was a thesis project, and it was stated that a presentation would be made to a jury of

Table 6. *"Output" Recommendations for Design Studio Levels.*

	Studio Level 1	Studio Level 2	Studio Level 3	Studio Level 4	Studio Level 5	Graduation Thesis / Final Studio (Studio Level 6)
Output	-modelling -scale in 100, 50 and 20 -two and three-dimensional drawings	-modelling -productability and usability -scale in 100, 50 and 20 -two and three dimensional drawings	-direct link for thesis on the project	-direct link for thesis on the project	-final presentation of furniture	-a thesis project exhibition -presenting to a jury of professionals -a thesis

professionals. Table 6 below shows the sub-themes revealed under the "output" meta-theme.

The study findings seen in Table 6 constitute the project course content recommendations for each level. The content analysis method for creating categories was applied based on converting similar sub-themes of the project course data, which were classified in this study, into a code. With this method and approach, the codes shown in the table above contain systematic and objective information that can be used as suggestions for each main theme and each studio level.

6. Discussion and conclusion

In this study, it is aimed to reach sub-themes that will reflect international interior design education with the method of content analysis for interior design studios, which is the most comprehensive course group in terms of course duration and professional practices in interior design departments. The findings resulting from this goal are tabulated for creating the studio recommendations, and sub-themes are revealed under the categories (content, skills, subject, output) created for interior design studios. These meta-themes and sub-themes have been shown separately for each studio level, and have been made available as a qualified example in the course program studies. Also, to discuss the differences and similarities between the examined schools and the schools in Turkey, no scientific study has been found that deals with the contents of the studios in detail. For this reason, some evaluations based on observations were made in this section.

According to the findings of this study, under the "content" category for the first level studio; It has been observed that there are contents of "human-space relation", "basic design applications", "concept development", "environmental relations and space perception". It is known that this aspect of the content of the first-level studio has long been applied in the interior design schools in Turkey, so it can be considered to be a significant similarity to the first level studio content. Frequently encountered under the category of "skill"; "determining user needs", "determining written program and concept", "high-quality presentation", "ergonomics knowledge" are seen as the basic skills acquired in the first level studio. Under the category of "theme", just as in the preferred section in Turkey, "housing" and "small space" issues came to the fore. Under the category of "output", the studio in the expected results of the project's stages, 2D and 3D drawings and using the technique of model, the data being supplied with match results as related to education in Turkey. In the first level studio in Turkey, it is frequently used in 1/20 scale in drawings and models. It can be said that there is a difference in this regard.

For the second-level studio, although there are concepts that are just beginning to spread last years, "design thinking methods" and "workshops" were faced with the content frequently. Under the category of "skill", the ability to understand market trends stands out as a new and not frequently encountered acquisition at the Turkey scale. There was an intense variety for the second level in the 'subject' category. Especially the "commercial space" and "hospital" that seen as the large-scale issues were found considerable.

The knowledge of working on "innovation processes and technology" in the "content" category for a 3rd level interior

design studio was considered new and rare. Regarding skills, the category with the most intensive content is the 3rd level studio. "Electrical and mechanical applications", "use of survey technique for research", and "advanced design thinking methods" are among the gains that are very significant and applicable in interior design studios. "Service systems" stands out as an alternative project topic proposal that can be studied at a different level of studio. In the "Output" category, it has been learned that this level can be carried out directly in connection with the graduation (thesis) project in 3-year programs.

4th and 5th level studios can be evaluated together as they are only in 4-year programs and are intermediate studios. Featured contents; conducting design studios in cooperation with other disciplines such as industrial product design and using "innovative design thinking" stands out. In addition, "scenario-based project making" that can be included in both content and skill categories can be considered as an alternative content that can be used in interior design education. It is seen that the practices of "acoustic comfort" and "code and structure regulation" stand out as skills at this level, unlike other levels. At these studio levels, "service design" as a subject has been considered as a new field than other subjects.

Final design studios are often called "thesis" in the analysis of the sample schools. Content of the design studios at this level as "professional simulation" that is, the student is expected to perform at a professional level. At this level, the content and subject are determined by the student in many programs. Independent project management skills are noteworthy in this category. Also, it has been observed that the project subjects are generally complex or multi-functional interiors and a furniture-based project can be in one of the programs examined. In the "output" category, it is frequently encountered in sub-themes that the final product of this level should be a thesis, it is seen that the project is expected to be presented to a jury of professionals and an exhibition is expected. It is known that, arranging exhibitions as output types are often applied in interior design programs.

Another significant conclusion that was reached in the study, when the studio content codes were examined, it was seen that the findings of this study have many common points with the concepts and themes in Table 1 created from CIDA and ECIA reports. Especially when both sources are examined it is precisely seen that, under the meta-themes of "content", "skill" and "output", themes such as "professional practice", "professional business simulation", "project management" that a graduate interior designer should have, and technical competencies for practice were emphasized. Apart from this, it has been observed that concepts such as "design process management", "creative process", "design process" and "problem-solving", which are frequently encountered in the content and skills that studios acquire, are compatible with the competencies under the heading of creative and social skills in Table 1. In addition, the fact that concepts such as "design thinking" and "innovation", which have become widespread in recent years and can be considered more recently, are frequently mentioned in the design studio contents, emphasizes the up-to-dateness of the course contents in this study.

As a result of the analysis of documents obtained within the scope of the study, a comprehensive and up-to-date source was produced that may help instructors and interior design education. Thus, a current and scientifically handled resource has emerged that can be used in the development of the content of project-based studios, which is the most intensive course group in interior design departments. In addition, the study allows seeing which design problems have been discussed in recent years in the world.

Design is a field that constantly renews itself and focuses on different and new problems every year. Therefore, one of the main aims of design education should be to transfer the skills of finding solutions to these new and different problems to design students. In Turkey in terms of the absence of an accreditation body capable of checking the interior design quality of education, this study could contribute data for the process of accreditation studies in interior design. In addition, since this study

was structured within the framework of the professional competence principles of CIDA and ECIA organizations in the field of accreditation, the sample group data were selected only from interior design departments in the USA and Europe. Schools from Asia, Middle East or the other regions may be included for future work, including countries that have internationally recognized organizations particularly in the field of design. Thus, the scope of the study can be expanded by increasing cultural and regional differences.

Endnotes

[1] ECIA European Charter of Interior Architecture Training 2020. (https://ecia.net/media/556/ECIA%20Charter%202020.pdf)

[2] ECIA European Charter of Interior Architecture Training 2013. (https://ecia.net/education/charter)

[3] CIDA 2020 Professional Standards. (https://www.accredit-id.org/professional-standards)

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